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Vol. 28

No. 5

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WI BROADCASTS

All Amateurs are urged to keep th frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VKžWI: Sundays, 1100 hours EST, simultan-eously on 3575 Kc., 7146 Kc., and 145.0 Mc. Intrastate call-backs taken on 7050

VK3WI: Sundays. 1030 hours EST, simultan-cously on 3573 and 7146 Kc., 51.016 and 146.25 Mc. Intrastate hook-ups taken on 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI

is on the air VK4WI: Sundays, 0900 hours EST, simultan-eously on 7145 Kc. and 14.342 Mc. Intrastate hook-ups taken on 7105 Kc. VK5WI: Sundays, 0900 hours CAT, on 7146 Kc. Intrastate hook-ups taken on 7125 Kc. Frequency checks given when VK-5WI is on the air and also by VK5MD

VK6WI: Sundays at 0930 hours WAST, on 7146 Kc. Intrastate hook-ups taken on 7085 Kc.

VK7WI: Sundays at 1000 hours EST, on 7146 Kc. and 3672 Kc. Intrastate hook-ups taken on 7115 Kc.

AMATEUR RADIO JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

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EDITORIAL

Extraordinary Meeting of W.I.A. Federal Council

The Federal Council of the Wireless Institute of Australia held an Extraordinary Meeting in Melbourne on Easter Saturday, April 16. The single agenda item was "to discuss the Final Acts of the Administrative Radio Conference of the Interna-tional Telecommunications Union, Geneva 1959, and to resolve the future policy of the W.I.A."

The Geneva Conference completed its work last December, the results of which, if implemented in May 1961, will deprive the Australian Amateur Service of 100 Kc. on the top end of the 80 metre band, 50 Kc. on the top end of the already sevunsatisfactory variations in the v.h.f. unsatisfactory variations in the v.n.i. bands. The Delegation withdrew a further proposal to reduce the 20 metre band by 100 Kc. For a country whose Administration has altry whose Administration and ways been so outspoken in telling ways been so outspoken in telling ways been so outspoken in telling after the interests of the Amateurs," and incomprehensible.

Furthermore, the proposed reduc-tions in the bands allocated to the Amateur Service in Region III. are, in part, inconsistent with statements made by the Hon. C. W. Davidson, Postmaster-General of the Commonwealth of Australia, and other Officers of his Department, who, last year before Honorable Members of both Houses of Parliament, gave as-surances that Australia would make no unilateral agreements if the majority of member nations were in favour of maintaining the status quo on Amateur band assignments.

That these assurances were not carried out is now quite clear, there-

fore the Australian Amateurs have every reason to consider that they have been given a raw deal. Already Honorable Members have again rais-ed the matter before the Postmaster-General in Canberra asking for reason why these assurances were not carried out and pointing up the De-partment's lack of concern for the future of the Australian Amateur Service. For the consideration of the Fed-

eral Council at its Extraordinary Meeting, the Federal Executive prepared a draft 70-page document compiled from the working docu-ments of the Geneva Conference and the memos from John Moyle's note book. In this document the entire story of the events leading up to, and the results of, the Geneva Conference are detailed. Australian Amateurs will ultimately be able to read the story for themselves. This report will become an histor-

This report will become an historical document for it points up the problems we have to face in the future in our efforts to protect the few hundred kilocycles we have left in the bands from 2 to 27 Mc. It highlights the low priority given to the future expansion of the Amateur Service as compared to that afforded by other countries. At the time of going to press the outcome of the Extraordinary Meeting of the Federal Council was unknown but members can obtain information on the deliberations from their Division's Federal Councillor in due course.

When can we expect a priority equivalent to other countries in which the technical problems asso-ciated with the use of the frequency spectrum are so much greater?

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The WARBURTON FRANKI Page

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Price: £26/1/- plus S.T.

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T.V.I. DIAGNOSIS CHART

J. E. ANDERSEN.* VK3ZFO

Connect transmitter to dummy load. making sure there is no radiation from QRM Clears. ORM Reduces. ORM Clears. Real Reduces.

In either case radiation is from tx itself. Using g.do. (as absorption wavemeter), locate frequency. By removing tubes, isolate stage of main radiation. Check this stage for correct adjustment (keep in mind the harmonic suppression of link coupled stages). Work forward to p.a. Shelid only if necessary. When clear proceed down. Tx itself is adequately adjusted and shielded. Harmonics generated, but radiated only from aerial.

Correct by fitting

ORM Clears. All clear.

COMMENTS

If nothing works, reduce power and try again, or use s.s.b. (You could always give in and watch t.v. yourself. -Editor)

There are a few points which it may be helpful to bear in mind when track-ing down the frequency of the inter-

fering radiation.

(1) For 6 mx band only, it may be useful to try traps at 50 and 200 Mc. at the tv. antenna terminals initially before proceeding down the Chart. Channel 2 is close to 50 Mc. which can cause serious front-end overload, and the fourth harmonic (200 Mc.) is near Channel 9 sound carrier.

(2) With t.v. receivers using incremental tuners: Any radiation in the t.v. band or any heterodyne into the band can cause interference on all channels due to the direct coupling

involved

(3) Strong b.c./s.w. stations carriers beating with the Amateur station's carrier can create a heterodyne in a t.v. channel, e.g. f.m. station on 95 Mc. and a Amateur station on 28 Mc. gives heterodyne on 67 Mc.—within Channel 2. The cure here is to trap either station

 The cure here is to trap either season at tv. antenna terminals.
 (4) Shielding and fillering are last resort measures. It is far better to arrange for minimum unwanted output in the first place, by running exciter stages at as low a level as possible, and by careful circuit design and adjustment to arrive at optimum drive con-ditions. One reason why s.s.b. causes little t.v.i. is that generally all stages are low-level Class A (no grid current)

and carefully set up. No Amateurs should modify a neighbour's t.v. or b.c. receiver. If the set is at fault, it is the owner's responsibility. Any adjustments on your part could lead to many future difficulties

Keep the P.M.G. informed of any steps you take, particularly if they are aware of the interference.

Secretary, VK3 T.V.I./B.C.I. Committee, 26 Adency Avenue, Kew, Victoria.

ORM Reduced. Tx has some spurious output. Leave Filter in. Check for excess grid drive, maintain grid current at minimum. Remove any capacity coupling to final.
(Preferably from other stages also,)

Tx now OK.
Disconnect T.V. Feeder Line.
Run (a) Carrier Only.
(b) Modulated or Keyed.

ORM Clears.

Interference enters via t.v. set aerial.

ORM Reduced or Unchanged.

ORM Remains Unchanged.

Tx has no

spurious output.

Possibly entering via a.c. mains or i.f. pick-up. May be reduced by Mains Filter at tx and/or t.v. set. If no result, refer to T.V.I. Committee or P.M.G.

Try Traps on T.V. Antenna Lead at possible interference frequencies.

ORM Clears.

Tx Rcv. sensitive to spurious radiation of a specific frequency or frequencies. Leave traps in permanently.

Remember your R.I. can be your best friend if you are experiencing t.v.i./ b.c.i., so keep him informed.

Do not waste time. Delays in locating and curing the fault will antagonise everyone concerned probably quite un-necessarily. Above all, maintain good relationship with the complainant, QRM and Picture attenuated only when trap tuned to t.v. channel.

Radiation due to non-linear detectors (rectifiers) in area. Bond all drain pipes, check earthing of metal objects.

(It is also a wise precaution to turn off the tx and see if the interference still continues. Instances have occurred where the local oscillator of a b.c. set or converter has been the offender.— Editor.)

Editor.)
(Acknowledgment is made to the R.S.G.B. who so readily made data available. The above Chart has been based upon the R.S.G.B. T.V.L./B.C.I. Chart.)

Amateur Radio, May, 1960

SYNCHRONOUS COMMUNICATION

PART TWO

M. R. HASKARD.* VK5ZBH

(ii) COMPARISON BETWEEN A.M., S.S.B. AND D.S.B.S.C.

In normal theoretical comparisons, an ideal s.s.b. signal is taken so that the results obtained are the upper limit for s.s.b. rather than the average practical results. In this paper it is hoped to show how things have to be modified to obtain practical results.

(a) Bandwidth Conservation

The first advantage of s.s.b. which comes to mind is that only half the bandwidth of a.m. or d.s.b.s.c. is used. pandwidth of a.m. or d.s.b.sc. is used. For an ideal ss.b. system this is true, but in practice this is not so. To obtain an ideal ss.b. signal we must have a very stable oscillator (better than 1 part in 10*)1 for once the frequency shift between the transmitter "carrier shift between the transmitter "carrier frequency" and local oscillator exceeds about 25 cycles/sec., the intelligibility falls off rapidly. We can only achieve this stability by using frequency synthesis techniques and this leads to large complex and expensive equipment. For many normal communication systems. we have to transmit some carrier and/or allow a slightly larger bandwidth for

In addition to the above, with s.s.b. the sideband not transmitted is sunpressed by the order of 30 to 60 db. but in certain circumstances it can still be insufficient. Consider the following example. We have a powerful fixed s.s.b. station and a small mobile s.s.b. s.s.b. station and a small mobile s.s.b. station, the latter working on a fre-quency which coincides partly or wholly with the frequency of the suppressed side band of the fixed station. It will be found, that during abnormal propabe found, that during annormal propa-gation conditions or when the two sta-tions are in the same area, the mobile station will be unable to hear its base station. The reason for this is blocking caused by the fixed station. This can be overcome only by careful frequency allotting, and this is not always possible in practice.

Thus we see that unless we use ex-tremely complicated equipment, a 2:1 bandwidth saving can only be achieved

If it is important to save on bandwidth to help overcome crowding of the high frequency spectrum, then it will be far better to employ other types

of communication such as frequency shift keying, where bandwidth savings of more than 10:1 are possible. (b) Signal-to-Noise Ratios (S/N)

Here again, it is usual to calculate the signal-to-noise ratio only for the theor-etical case. In Table 1, the signal-tonoise ratios are given when equal average power for the three systems is taken as the basis for comparison. (Equal peak powers were not used as basis for comparison, for if a s.s.b. system is modulated with a waveform

which has a fast rise time, we require an infinite peak power; i.e. the ratio of average power to peak power is • 3 Te Anau Ave., Prospect, South Aus.

dependent upon the modulating waveform. In practice, we find a system is limited to a certain finite peak power, thus we see that using equal peak powers will not give a true practical result.) Calculations were made for three

Calculations were made for three types of detectors, using any arbitrary modulating signal. We see that for an a.m. system, a linear detector gives a a.m. system, a linear detector gives a S/N ratio 3 db. down on either a square law or product detector, and that we lose signal power by having to transmit a carrier. Because of this, both d.s.b.s.c. and s.s.b. systems give better signal-to-noise ratios. It may be noted that the 9 db. often quoted for a s.s.b. system above an a.m. system, does not

emphasise again that in these calculations we have taken an ideal s.s.b. system. If now we allow for the transsystem: If now we allow for the transmission of a carrier and/or the increase in bandwidth for drift we find the signal-to-noise ratio for a product or square law detector of the form

(S/N) s.s.b. = $\frac{2(P_{1n} - S_s^2)}{4N}$

As expected, our signal-to-noise ratio depends greatly on S, the ratio of increase in bandwidth. For a practical case, if we have a d.s.b.s.c. system with an audio bandwidth of 3.5 Kc., then our s.s.b. system will be of the order of 4.5 Kc. (i.e.) d = 1.3, and our s.s.b. signal-to-noise ratio will be ap-

System	Linear	Square Law	Product		
System	Detection	General Formula	For Large L	Detection	
A.m.	$\frac{(P_{in} - \frac{1}{2} S_o^2)}{N}$	$\frac{2L^2 \ (P_{1n} \ - \ \frac{1}{2} \ S_o^2)}{N \ (P_{1n} \ + \ L^2)}$	2 (P _{in} — ½ S _o ²) N	$\frac{2 (P_{in} - \frac{1}{2} S_{e}^{2})}{N}$	
D.s.b.s.c.	-	$\frac{2L^{i} P_{in}}{N (P_{in} + L^{i})}$	2 P _{in} N	2 Pin N	
S.s.b.	-	$\frac{L^{2} P_{1n}}{N (P_{1n} + \frac{1}{2} L^{2})}$	2 Pin N	2 Pin N	
Table 1.—Signal-to-Noise Ratios for the Three Systems.					

appear here. This was calculated for a very special case, i.e. equal peak powers and sinusoidal modulation. As here one could have easily taken equal average powers and a different modulating signal and so not obtain a 9 db. increase in S/N for s.b. In practice it is seldom that 9 db. does occur, since speech is not just a single sinusoidal

We also find that s.s.b. has no advantage over d.s.b.s.c., as may be expected

first sight.					
		List of Symbols			
a.g.c.	=	automatic gain control.			
a.m.	=	amplitude modulation.			
c(t)	=	carrier function.			
0.117	_	continuous wave			

d = the percentage increase in bandwidth.

delta = small error in phase be-tween the incoming signal and the local oscillator. d.s.b.s.c. = double sideband suppress-

ed carrier E. = screen grid potential. f.m. = frequency modulation.

L = local oscillator signal's peak amplitude.

amputude.

M(t) = modulating function.

n = class C efficiency.

N = average noise power.

p = modulating signals fre-

p.m. = phase modulation. Pin = radio frequency signal power into the detector

stage. S/N = signal-to-noise ratio. S. = carrier peak amplitude. s.s.b. = single sideband. (1/T) = the attenuation factor of

the signal power during transmission. w = carrier frequency.

proximately 1 db. down on our d.s.b.s.c. system signal-to-noise.

The s.s.b. signal-to-noise ratio in-creases as the carrier is suppressed more and more. However, once the carrier is suppressed 20 db. or more, there is little increase in the signal-to-hoise ratio. The 20 db. also applies to a d.s.b.s.c. system.

on the receive a sab signal on a school of the sab of t

(S/N) d.s.b.s.c. = 2(S/N) s.s.b. Or, if we receive s.s.b. on a square law detector, then for large signals we law detector, then for large signals we achieve the same signal-to-noise ratio as we can in a synchronous system, but when we have a small input signal we can no longer forget some of the noise terms of a square law detector that we ignored before. Thus for small that we ignored before. Thus for small signal inputs our signal-to-noise ratio decreases. Also because of the square terms in a square law detector, we have distortion which does not occur in a

product detector. One may argue that we have also taken the optimum case for d.s.b.s.c., i.e. correct phasing, and this may not occur in practice. For a normal square occur in practice. For a normal square law detector this is correct, but for a synchronous detector, which we will be a superior of the superi for small deltas, cos (delta) equals approximately 1.

Thus we can only say that the signalto-noise ratio of a d.s.b.s.c. can be slightly better than that of a s.s.b. system, but never worse. Both d.s.b.s.c. and s.s.b. systems have signal-to-noise ratios far better than that of a conventional a.m. system.

(c) Clipping

If we analyse the envelope of speech, we find that it is very "peaky". When we fully modulate a transmitter it is these peaks which limit the amount of modulation so that for, say, an a.m. system, where we 100% modulate on system, where we 100% modulate on peaks, our average modulation is only about 30%. To overcome this, we can do several things, the simplest being to peak clip and filter our modulating signal. This clipping also gives us a type of automatic gain control effect, so that our average percentage modulation remains almost constant.

remains almost constant. If we modulate our transmitter with If we modulate our transmitter with the work of the w (for speech), therefore we must at-tenuate the low frequencies. To keep our radio frequency bandwidth down to about 7.0 Kc, we must have an upper frequency limit of about 3.5 Kc. for our modulator. This still gives an articulation of about 30%. When we clip our waveform we produce har-monics, and to eliminate the high fre-quency harmonics we must have a low pass filter with a cut-off frequency of pass fi

It has been found that about 8 db. of clipping increases the "talk power considerably without decreasing th intelligibility and up to 24 db. of clip-ping can be used.

Thus we can see that by simple clip-I mus we can see that by simple clipping we can modulate deeper, and so obtain added "talk power". This can be done for am. and ds.b.s.c., but we find for s.s.b. that any waveform, which has a fast rise time, gives rise to infinite peak power. To overcome this, we must introduce a more complicated circuit so as to limit our peak power. This is a disadvantage for a s.s.b.

(d) Interference and Noise

system.

Although under ideal conditions s.s.b. can give as good a signal-to-noise ratio as a d.s.b.s.c. signal, we find that by having an extra sideband present by having an extra sideoand present in the latter we can eliminate some noise. We can easily imagine our d.s.b.s.c. signal as two s.s.b. signals, i.e. we have a frequency diversity system. If we have noise or interference from an adjacent station in one sideband we could then receive the other sideband and so obtain noise or interference-free reception. In a synchronous receiver we find that signals in the I and Q chan-nels (Fig. 6) due to our noise or internels (Fig. 6) due to our noise or inter-ference (in one sideband) are 90° out of phase (Fig. 7), and so by introduc-ing our alpha and beta networks to give a total phase shift of 90° we can cancel out the noise or interference from this one sideband. By switching we can select the sideband from which we reject the noise.

In practice, however, there is noise in both sidebands and we can eliminate only the asymmetrical portion of the noise (Fig. 12). The reason is that a narrow band of noise selected from white noise approximates an a.m. signal. Symmetrical noise therefore gives an output from the receiver similar to any a.m. signal instead of cancelling out as a.m. signal instead of cancelling out as is the case for noise existing in one sideband only. For a very large back-ground noise the receiver may not track, and so the phase loop will have to be disconnected and therefore the receiver must depend upon the stability of the local oscillator.



shaded portion of the noise is eliminated Fig. 12.

By keeping our two sidebands, there-fore, we have the advantage of being able to reject interference and some noise from one sideband.

(e) Selective Fading

At first sight it would appear that s.s.b. will suffer less from selective fading than d.s.b.s.c., because it has a narrower frequency bandwidth. However, if we examine a d.s.b.s.c. signal, to obtain poor reception owing to fad-ing, the two sidebands must be reduced ing, the two stdebands must be reduced in amplitude and/or the phase changed in such a way that they are in phase opposition. For this reason complete drop out is less likely to occur with d.s.b.s.c. If, however, the amplitude and phase of a d.s.b.s.c. signal do change, then the local oscillator in a synchronous receiver also changes, and in such a way as to attempt to compensate for the first change, thus improving things.

These remarks are borne out by theory and experiments carried out by John P. Costas in U.S.A., who found that the d.s.b.s.c. system was never worse than the s.s.b. system (over the same path).

(f) Economics

Previously we have seen that both d.s.b.s.c. and s.s.b. systems are far superior to an a.m. system. However, an a.m. system has the advantage that its circuitry is the simplest of the three systems, and therefore is the least expensive to construct. On the other hand, both a s.s.b. transmitter and renand, both a s.s.b. transmitter and re-ceiver are complex, and therefore ex-pensive and more difficult to operate. For example, in the transmitter we need at least one high power linear amplifier, and if wishing to modulate the transmitter with waveforms with fast rise times, we will need complicated circuitry to limit our peak power. To ensure good frequency stability, we

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can use either frequency synthesis, which is extremely complex, or transmit a suppressed carrier which is mit a suppressed carrier, which is and thus means additional circuitry

In between these two, we have a In between these two, we have a d.s.b.s.c. system. The transmitter is even simpler than an a.m. transmitter, but the receiver is as complex as that used for ech There is another advantage which d.s.b.s.c. has over s.s.b. If an a.m. system is to be improved, it is much

simpler and changes to consent it to a debec evetem than to a eeb evetem

Honce we have shown that a dehec evetem is at least as good as a sish system in all the cases that we have considered in this theory. In fact when we modify the theory to include prac-tical limitations, we find that a d.s.b.s.c. seh evetem

A summary of these comparisons is

	System					
Characteristics	A.m.	D.s.b.s.c.	S.s.b.			
Bandwidth	Twice the highest audio frequency.	Same as for a.m.	Half the bandwidth (or more) of an a.m. system. Depends on the complexity of the system.			
S/N (for equal average powers)	Poorest S/N is for a linear detector while for a product or square law de- tector it is 3 db. up on the linear detec- tor. Signal power wasted by trans- mitting the carrier.	better than a.m. sig-	Slightly worse than d.s.b.s.c., but much better than a.m.			
Clipping	Can increase the "talk power" by simple clipping.	Same as for a.m.	Simple clipping cannot be employ- ed because of r.f. peak power in- crease.			
Interference and Noise Reduction	With a synchronous receiver you can re- ject noise or inter- ference from one sideband.	Same as for a.m.	No interference re- jection, but inter- ference is reduced because of the nar- rower bandwidth.			
Selective Fading		Distortion but less chance of drop out than s.s.b. signal.				
Economics	Cheapest system, as circuitry is simp- lest.	Medium cost as transmitter simple but receiver as com- plex as s.s.b. re- ceiver.	Most expensive of the three systems.			

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THE HARD WAY

THERE had always been an urge to have a portable rig at VK5JG, so that when about ten years ago a couple of I.F.F. genemotors were acquired, plans began to take shape and after about two years the rig was completed.

completed.

The genemotors, rated at 18 volts input and 450 volts output, were found to give 250 to 300 volts output with an input of 12 volts, which was the voltage of the car battery, and with the inputs in parallel and the outputs in series, 250 volts were available for the receiver and the earlier stages of the transmitter, and 500 volts for the final.

The transmitter consisted of a v.f.o. with a 1625 final, screen modulated by a 1235. The receiver was a simple superhet with an r.f. stage and was bandswitched to Amateur bands only.

The outfit was first tried on the Field Day of 1952 and operated successfully for a short period. The car battery at that time was nearing the end of its life and a couple of 6 volt batteries were borrowed to run the rig.

Next year the rig was again successfully operated on the Field Day but again it was necessary to borrow batteries because late in 1952 a new car with a 6 volt system bad been

Although the urge to operate portable on Field Days still persisted, the trouble in borrowing and transporting batteries discouraged further attempts. The purchase of a nickel-iron type battery which holds its charge and does not deteriorate if left unused was considered but not proceeded with because of the very high cost. The portable of the very high cost. The portable receiver was found to be more con-venient than the main receiver at VK5JG and took over this function.

Round about 1955 a Burke hand generator from disposals was advertised generator from disposais was advertised and partly with the idea of operating and partly with the idea of operating of curiosity, one was purchased. This generator came complete with a light collapsible bench to which the genera-tor was attached. Sitting astride the bench the generator was driven by turning two handles, one for each hand.

The output was 10 volts 1.25 amps, and 400 volts 70 mA., and the voltage was rigidly controlled by a vibrator in the field circuit, the same method as used in car generators.

After considerable planning on how to use the 10v, for heaters and the 400v. for the receiver, it was discovered that for the receiver, it was discovered that y altering the tension on the vibrator reed with the screw provided, the generator could be set to give 6.3 volts low tension and at this setting 250 volts were obtainable from the high tension. At 6.3 volts it was assumed that 2 to 3 amps. would be available.

The generator was first tried on a small receiver to see whether it caused interference. It was found to be free of commutator hash but the vibrator caused a small amount of noise which could be avoided by turning the gen-erator at just below the speed of volt-age control cut-in. However the effort to turn the generator with about 25 watts input to the receiver was considerable and all ideas of using more than 250 volts for the transmitter were discarded. It was realised that it would discarded. It was realised that it would be necessary to design a transmitter and receiver with economy of power (human power) as the first considera-tion. A rig was then constructed as follows:

Transmitter: 6AC7 crystal oscillator (Pierce), VT501 power amplifier (8w. input), EF36 and 7C5 plate modulator.

Receiver: A previously built portable receiver was modified to ECH35 con-verter, EF39 i.f. amplifier. EF36 bias detector, and 6J5 output into a loudspeaker. The transmitter was fitted into the space formerly occupied by the dry batteries.

The rig was first operated and tuned up on a.c. power and was then given a try on the generator. It was found possible on "Receive" to turn the gen-erator with one hand while the other was used to tune the receiver, but on "Transmit" both hands were required plus the receiver heaters.

As Field Day of 1960 drew near, attempts were made to obtain an assistant to help in the operation but when winding the handles was mentioned winding the handles was mentioned nobody showed any interest and it was necessary to play a lone hand on the day. Eventually a site was selected between two trees at 11 a.m. and after some trouble with angled fishing lines, these were shot over the trees with powerful catapult (shanghai), a folded dipole was pulled up, and operation commenced about midday.

When erecting the antenna the pencil brought for filling in the log was lost and the log had to be written on a large sheet of cardboard with a char-coal stick from a nearby burnt tree. This added to the difficulty of operation as in any case it was necessary to stop generating to make an entry in the log. Nevertheless, eleven contacts were made with signal reports averaging 8 in about 24 hours of intermittent operation. At the end of this time the arms were so weary that the station was closed down and packed up before the end of the Contest.

Altogether it was an interesting day and the following conclusions were drawn re hand generator operation:

One man operation is possible, but one man cannot supply 50 watts input continuously for more than 15 to 20 minutes.

Two men or preferably three would be required to maintain intermittent communication as in Field Day

operation or emergency work for periods of over two hours. There would obviously be no worries

as regards batteries running down. The total weight of the rig is less than that of the average 6v. storage battery, the heaviest part being the generator at 19 lbs., and two men could carry the complete rig a mile or more country inaccessible to motor vehicles.

-J. A. Gazard, VK5JG.

I.T.U.-Question in Senate

The following is an extract from Hansard of a question, re I.T.U., asked by Senator Hannon on 15th March. '60:

Senator Hannan.—I ask the Minister representing the Postmaster-General the following questions: Will the Minister at an early date lay on the table of the Senate the draft convention agreed at at the recently completed International Telecommunications Union Conference at Geneva, together with any subscripts to the main document and the names of states appending them? Will he give an undertaking that the convention will not be ratified by the convention will not be rained by the Executive without an opportunities of the Executive without an opportunities of the Executive will be seen assurance that it? Will be give an assurance that pending the discussion of the convention by the Senate, no departmental action will be taken by way of allocation of frequencies or the like, which would amount to a breach of the unwould amount to a breach of the un-dertaking given with respect to this matter by the Government and the department to members of all parties in May, 1959? Is it not a fact that Aus-tralia, as represented by the Post-master-General's Department, was the only English-speaking country at the Geneva conference which failed to vote on the side of Britain and the United States of America in favour of a resolution designed to protect agreed amateur radio frequencies from unlawful use by international radio pirates? it not a fact that in this vote Australia has had the dubious support of the

Senator Sir Walter Cooper -- I should like to say a word about the question which relates to the taking of departwhich relates to the taking of depart-mental action. I cannot give an assur-ance that permission will be given for the documents to be distributed prior to their coming before the Parliament. remember quite well the meeting about which the honorable senator spoke; it was held, I think, in May last year. I feel that the Postmaster-General would stand by what he said at that meeting. I ask the honorable senator to place the remaining questions on the notice-paper.

HAMADS

The Publications Committee is pleased to announce that following the mentioner than the P.M.G. Department has agreed to the use of Call Signs in connection with "Hamada". In only show ther Call Sign if their address is correct in the Call Book), and if desired may also give their phone number The use of Amateur frequencies for the pur-pose of negotiating sales of equipment is not permitted by the P.M.G.

Hamads may only be used to advertise equip-ment which is the personal property of the advertiser, who is a member of the Wireless Institute of Australia.

We are very pleased that the P.M.G. have agreed to permit the use of Call Signs in Hamads and we take this opportunity to thank them for their co-operation.

Have you any surplus gear and need the circuit diagram? Saw a new Handbook in McGill's technical book section which gives a lot of details regarding equipment available in Autralia. Was told coptes are limited.

OFFICIAL OPENING N.S.W. DIVISIONAL HEADQUARTERS

WIRELESS INSTITUTE GOLDEN JUBILEE PARTY

LATE in 1959 the Council of the NS.W. Division of the Wireless Institute of Australia was directed by a majority vote at a general meeting to acquire a metropolitan or suburban at Headquarter for the Division. A subcommittee was formed and subsequent to the recommendations of this committee steps were taken to acquire the 14 Atchison Street, Crow's Resident

The property is located within three minutes' walk of St. Leonard's railway station and is served by other public transport on the nearby Pacific High-

way.

The official opening was held on 12th
March, 1960, which coincided (plus two
days) with the Golden Jubilee of the
Foundation Meeting of the Wireless
held in the Australia Hotel in Sydney
on 10th March, 1910.

Guests of Honour at the Official

Opening of the newly acquired premises were Wal Hannan (VK2AKH) and John Pike (VK23P), both of whom had attended the inaugural meeting fifty years earlier. Other guests included many "old-timers" and several Past Presidents of the VK2 Division of the WI.A.

In such a gathering of "old-timers"

the "young squirts" listened with interest (and amazement) as the Methuselahs reminisced about their early experiments in radio (or wireless as it was then known). From the stories was then known). From the stories days, it was apparent that these pioneers of Amateur Radio were not always on good terms with the appropriate authorities. It was interesting to learn that the licence fee in those days was

OBITUARY

C. T. (CEC.) HORNE, VK2AIK
Cec. passed away early in the month of
April. He had served as an office-bearer in
early years in the N.S.W. Division of the
Wireless' Institute of Australia.

S. (SYD). SMITH. VK2APS
Syd. had been an Ameteur for many
years, and westell knownen 40 metres,
He led 2 metre activity in the Tamworth
area and was a keen supporter of W.I.C.E.N.
since its inception. Syd. passed away on
Tuesday, 5th April, 1960, and is survived
by his wife and family.

HORRIE E. (DICK) DICKASON, VKSRE Dick little from a heart stately on 20th March, 1960. He was for some pears living at Armadale, Vic., where he conducied a Radio Sales and Repair business. He was very active on the 50 Mc. band and although interested in both h.f. and v.h.f. bands did a considerable amount of operating on

this band.

Dick moved to Horsham, Vic., and spent a few years in a radio business and still operated to a lesser extent from that location on both h.f. and v.h.f. bands,

On his return from Horsham he was living at McCrae, where he had not been well for some months, but was going to resume work when he suffered the attack from which he died. Dick leaves a wife and five children.

The sympathy of members of the W.I.A. s extended to the families of the above

£3! Perhaps a financial wizard may care to calculate how much that amount represents in present-day values!!

Joe Reed (VKZJR) delivered interesting discourse on his experiments in the early days and related how exweys. The same of the control of the

Wal and John spoke of their experiments in the ploneer days. Mention was made of a receiver employing and the plant of the

Other speakers traced the history of the Institute up till the present. Two points stand out in history of Amateur Radio in this State. One is the matter

of Amateurs not always being in the best harmony and the other point is that of the progress which has been made in this State. (At the time of writing, the VKZ Division is a close-knitted organisation with over 1,100 members!)

The President, Dave Duff (VKZEO)

The President, Dave Duff (VKZEO) eventually restored some semblance of order in the gathering and accompanied by the flashing of lights and the clicking of cameras, Wal Hannan cut the birthday cake which had been baked and decorated by Brenda Whiting.

The partygoers then retired to the committee room where a minute's committee room where a minute's Moyle (YKZJU) who had passed no two days earlier. Dave then asked Joe Reed to dedicate a tramed photographic in the "Daily Telegraph" during March in the "Daily

times.

Joint public for the function the President, Day Dulf, paid thanks to those who had attended and to those who had tendered apolgies. He also thanked the ladies who had looked after the preparation and serving of afternoon preparation and serving of afternoon properties. The preparation of the properties of th

I.T.U.—Extraordinary Meeting of W.I.A. Federal Council

For general information we publish the following: If ever there was an urgent reason for the Federal Council to meet together it is Faster 1960!

it is Easter 1980!
The Geneva Conference of the International Telecommunications United and the Conference of the International Telecommunications United Conference on Service in Region III. is concerned it has received a raw deal. There is so much "feeling" about the result that urgently—hold an Extraordinary Meeting of the Feederal Council. This is not a Convention There will be only one and the Conference and plan the policy to be adopted by the Wireses. Institute of Australia for the Conference and plan the policy to be adopted by Wireses.

Matters relating to the Geneva curtailment of frequency allocations in the Amateur Service in Region III. have arready been spoken about in Camberra. From the Company of the Company of the they consider to be the right initiative in supporting the proposition that these matters should be handled politically. The New South Wales Division is callthe company of the Company Much of the information being cir-

Much of the information being circulated is far from correct and may be the cause of embarrassing the W.I.A. and the Australian Amateur Service to the point where the harm done can be far in excess of any good. It is, therefore, high time that the Federal Council took control of the problem and this can only be done by an Extraordinary Meeting. It's entirely up to your Division, but if you take the advice of this Executive, you will send your Delegate without any more after.

without any more ado.

It will be necessary for a unanimous It will be necessary for a unanimous Meeting. If one Division dissents, the meeting will not be held. As the exception of the processary of the proces

The Australian Amateur Service has never faced such a problem before and it is of the utmost importance that the Wireless Institute of Australia takes over properly authorised control of the situation before it is too late. The Fedsituation before it is too late. The Fedsituation before it is too late. The property of the control of the authority, must do that—and it must do it now!

All Divisions have indicated their willingness to send a delegate to the extraordinary meeting of the Federal Council of the Wireless Institute of Australia.

1960 National Field Day Contest Results

THE Federal Contest Committee has much pleasure in presenting the results of the 1960 National Field Day Contest which surely must be classed as the most successful field day contest conducted in Australia to date. There were 78 entries altogether in the five sections and competition in some sections was very keen. The winners of the various awards are to be congratu-lated on their fine results which in many cases were achieved under very adverse weather conditions

As was expected, most interest was shown in the phone section, but it is pleasing to see the support given by listeners in the receiving section and listeners in the receiving section and the participation of several Z call licensees. Comments offered by the content of the c a team, and either at home or in the to have suited most contestants.

It is obvious, especially after read-ing VK3ADL's interesting article in the April issue of "Amateur Radio," that much fun was had by all, to say nothing of the valuable experience gained. The participation shown this year augurs well for a bigger and better contest next year.

AWARDS

AWARDS		
Section A-Portable Phone:		
VK2ARZ-M, R. Riley	327	pts
VK3APJ-P. J. Dettman	719	"
VK4OL-A. J. Hansen		22
VK5AQ-T. F. Robbins		,,
VK7TT-T. Tongs	422	"
Section B-Portable C.w.:		
VK2ARZ-M. R. Riley	41	pts
VK3AKN-D. G. Baulch		
VK4ER-R. E. Lees	75	
VK5XK-A. J. Hewitt		,,
VK7KA-K. E. Millin	197	,,
Section C-Multiple Operator:		
VK3OM-R. Fisher	049	nte
VK5DY—C. J. Tatum		Pou
VK7JB-J. Batchler		"
		"
Section D-Fixed Stations:		
VK2YN-J. Watt-Bright		
	405	"
VK4CI-C. E. Cogzell	90	"
VK5OR-B. Bussenschutt		"
VK7SM-S. G. Moore	909	**

Section E-Receiving:		
WIA-L2159-R. Thomson		pts
BERS-195-E. Trebilcock		,,
VK4-C. H. Thorpe		
WIA-L5031-C. Hutchesson		**
WIA-L7004-R. E. Rogers	610	"

LOGS VK2ARZ 327 2AAH VK3APJ 3ADW 3PZ 3HE 258 3WM 153

Section A VK4OL 4UX 103 4ER VK5AQ 5AV 5ZBZ 3JO 3AKN 3OH 114 Check Logs: 103 80 73 VK3EM VK7KA Section B VK2ARZ VK5XK 197

91

497

995

485

45

565

255

125

360

345 290

VK3AKN VK7KA VK4ER 4OL 38 7CH Section C VK3OM VK3W1 3ML VK5DY VK7JB VK2YN 510 VK3YQ VK4CI

VK3AIT VK5OR 5ZPI 3K(SAKN VK7SM 3AKZ 7KS 205 7MX 3QV 165 Section E

R. Thompson, WIA-L2159 D. W. Shepherd, WIA-L2033 B. Carroll, WIA-L2074 Trebilcock, BERS-195 Jobson I. Thomas, WIA-L3065 R. Loutit, WIA-L3064 D. Grantley, BERS-1002 H. Thorpe C. Hutchesson, WIA-L5031 W. Clayson, WIA-L5015 Miss O. Martin E. Rogers, WIA-L7004 A. Geeves, WIA-7001

D. F. Ford Ineligible: B. Eastwood, RA2675

FEEDBACK

Today, from every source, we hear comments regarding the shortcomings ments are, in the main, due to the fact that all concerned are not being kept fully informed of the organisamunications is becoming a major world problem, so you are not alone when you think "I am not being told what is going on."

It is ironical that Radio Amateurs. It is ironical that Radio Amateurs, skilled in the art of communications, are apparently lacking adequate lines of communication, as today we do not read overmuch of our fellow Amateurs' activities in the pages of "A.R." you may consider "A.R." is dull and lacks brilliance, but remember it is only a mirror reflecting what it receives.

The pages of "A.R." have, and always will be, open for fair comments. So why not make our hobby more active by commenting upon what you desire in the pages of "AR." If practicable your ideas will be adopted, if impracticable you will be adopted why the idea was not proceeded with.

A hobby is run by people who have aims, achievements, failures and feel-ings. Let us make "A.R." reflect the true team spirit of Amateur Radio. Let us get things moving, have some-thing done, rid ourselves of the idea "the other man will do it."

Most intrigued by the suggestion (April "A.R.") that the "Call Book" has a classified section.

Have been trying to imagine the effect of a Pansy covered page.

To whom it concerns. A bull IS a strong active animal capable of going on for effer and effer and effer.

Nice to hear on the air. Offer from one Amateur to another not so fortun-ate one to build him some equipment -and at no charge. Amateur Radio is a friendly hobby.

Black mark to the character who heterodyned the VK7 Broadcast. Suggest OM that if you feed your oscilla-tor on raw a.c. you will do a far more effective job. If you care to read the literature you will discover there is a lot of technique to be learnt before jamming is effective.

Congratulations to the 14 Mc. high-Congratulations to the 14 Mc. nign-speed v.f.o. driver. Man, you sure can drive. Suggest you get your brakes relined, as you pulled up several kilo-cycles outside of the band edge.

CHOOSE THE BEST-IT COSTS NO MORE





PROTECT YOUR TRANSISTORS WITH ORYX

There is a danger of damage when soldering to transistor leads, due to A.C. leakage currents. The use of a low-voltage transformer supply, with earthed secondary is therefore recommended. Take care also that too much heat is not applied to flying leads. The ORYX iron, and a heat-sink such as heavy pliers gripping the lead between the contact point and the transistor, will ensure protection.

- Fast heating element, ready for operation in less than one
- Exclusive design features resulting in universal acceptance of ORYX as the standard miniature soldering instrument.
- The ORYX long life element will outlast several bits which are of tight bush-on fit.

	Bit Dia.:	Volts	Watts	Nett Weight	Length	Recommended Use
1	Model 6 1/16" (Fixed)	6	6	0.25 oz.	6"	Electrical measuring instrument fine assemblies, hairsprings, R.F. pick-up and speech coils, hearing aid sub-assemblies, etc.
	Model 6a 3/32" (Push-on)	6	6	0.25 oz.	6°	As for Model 6 (for extremely delicate work only).
	Model 9 5/32" (Push-on)	6, 12, 24-27½	8.3	0.25 oz.	6"	Hearing Aids, Radio and TV Sub- assemblies, Coils, Electronic Instruments, Model Construction, Electro-Medical, etc.
	Model 12 3/16" (Push-on)	6, 12, 24-27½	12	0.5 oz.	6.25*	Radio, Television, and Telecom- munications assemblies.
	Model 18 3/16" (Push-on)	6	18	0.75 oz.	7‡"	For heavier work, heat capacity equivalent to that of most 80 watt soldering irons.

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AMATEUR CALL SIGNS MONTHS OF NOV., DEC., '59, JAN, '60

NEW CALL SIGNS

VK— Australian Capital Territory
IME—E. J. Kerkin, Radio Station, "Harmon,"
Canberra. New South Wales
2MG—Macquarie Radio Club, 57 Darling St.,

2MG—Macquarie Radio Club, 37 Darling St.,
Dubbo.

Dubbo.

Dubbo.

Dubbo.

Dubbo.

Darling St., Gostord.

M. J., Carlot, "Takhra" Spring Ridge,
2TM—T. E. Huntler, 8 Wallaby St., Way Woy.
22.3—E. J. Roberts, Kirkton Private Hospital,
Darlinghurit Rd., Kings Cross.

Darlinghurit Rd., Kings Cross.

Darlinghurit Rd., Kings Cross.

Darlinghurit Rd., Kings Cross.

Zamana, "Rushcutter Bay,"

Zamana, "Rushcutter Bay,"

Jamana, "Rus 2ANN-D. Y. morte, survey of the Country of the Coun 2AVP-H. A. Perrim, or same and the Azav Lieght, S. G. Lloyd, 104 Main Rd., Kahibah. 2ZBN-R. J. Bleakley, 857 New Canterbury 2ZBB-L. J. Lumaten, 67 Gueudecourt Ave., Earlwood, C. L. Lumaten, C. Expression, 9th Avenue, Llandillo, via St. 2ZDK-D. King, 9th Avenue, Llandillo, via St. Marys.
2ZNM-N. A. Michie, 19 Corona Ave., Rose-ville. 2ZRD-S. R. Dogger, 45 Ewart St., West Mar-

rickville. 2ZVB-H. Van-Bilsen, 118 Addison St., Goulburn. 2ZVL-K. Laws, 13 King St., Botany.

22VL—R. Laws, 16 Anng St., Botany.
3UF—D. A. Frye Yieldra,
punyal.
3UF—D. A. Frye Yieldra,
3WB—A. W. D. Wilson, "Bundoran South,"
Glenthomp:on.
3YC—J. J. Wisenan. 9 Layfield St., South
3AAY—W. S. Yarrington, Gowrie Ave., Frank-3ABQ—Ston. Blackwood (Dr.), Station: Buxton
3ABQ—Ston. Blackwood (Dr.), Station: Buxton
Bd Marywille; Postal: 10 Mooltan
St., Flemington,
3ACF—C. J. Fowler, 116 Anderson St., Yarra-3AWX—S. Davies, 14 Avocet St., Doncaster East. 3AYF—G. W. Fink, 23 Deauville St., Beaumaris.

3ZEV-A. R. Vinicombe, 50 Hillview Avc., Mt. Waverley. 3ZFN-J. N. Bradshaw, 31 Summerhill Rd., East Reservoir.

3ZGJ-G. J. Champion, Spring Rd., Springvale.

3ZHB-W. G. Higgins, 49 Kensington Rd., South

Associated and the state of the

South Australia 5DG-J. E. S. Day, 457 Cross Rds., Plympton Park.
5EJ.—K. V. Ford, 1 Donnington Rd., Elizabeth
North.
SIA.—M. Rf. Allwright, 118 Brougham Place,
North Adelaide.
SIP.—P. I. Woodlands, 5 Clinton Ave., Myrtle Park. 5KO-J. E. de Cure, 10 Portland Court, Fulham. 5NQ-J. McVale, 573 Main North Rd., Elizabeth North.

5OD-Open Dock Marchant Rd. Strathur, 5OD-Open Dock Marchant Rd. Strathur, 5OV-D. R. Box, 17 Janet St., Maylands.

5PP-Port Pirie Amsteur Radio Society, C/o.

51 Alexander St., Port Pirie.

5ZCU-Netry Anderson, 272 Fullarton Rd., 5ZCU-A. W. Anderson, 252 Netherby. 5ZDE-W. M. Crawford, Ferguson St., Kingsto 5ZDS-D. R. Shinkfield, 7 Derwent Ave., Re

trevor.
5ZFM-G. H. Herden, 386 Marion Rd., North
Plympton. Plympton.

Western Austrials South Perth.

6KS/T.—V. Pierre V. Pierre St., Come.

6KS/T.—T. Storer, 21 Erie St., Come.

6KS/T.—T. Storer, 21 Erie St., Come.

6KS/T.—T. Storer, 21 Erie St., Come.

6KS.—A. F. Mellow, 1 Eliot St., Gerladton.

6FG.—E. Greate, 80.

6FG.—A. T. Storer, 81.

6FM.—R. V. Miles, Station: Troughton Island;

6FM.—B. V. Miles, Station: Troughton Island;

6FM.—B. V. Schembal, 4 Tyrel St., Nedland;

6FM.—M. Rosenthal, 4 Tyrel St., Nedland;

6FM.—A. W. Clowes, 4 Nicholson Rd., Sublaco.

0VI.—A. Clowes (Mr.), 4 Nicholson Rd., Sublaco.

iaco.
6ZAI.—A. J. McCarthy, 81 Napier St., Cottesloe.
6ZCG.—F. J. Lance, 72 Guildford Rd., Mt.
Lawley. R. Crosthwaite, 75 Tranmere Rd.,

TIC-P. R. Crosthwaite, 75 Tranmere Rd., Howrah. 7MS-D. M. Slowan, "Gienbrook," Bass High-way, Spreyton. 7ZAP-W. J. Henry, 1 Nutgrove Ave., Sandy Bay.
7ZAQ—W. J. Emmett, 8 Haig St., Lenah Valley.
Territory of Papus and New Guinea
9AN—A. D. Nutt, Rugli, via Mt. Hagen.

OCX—B. H. Wall, Wilkes.
OGC.—G. R. Cresswell, Mawson.
OGH.—H. Geysen, Mawson.
OKJ.—W. L. Currie, Mawson.
OKJ.—W. K. Jones, Wilkes.
OFF.—Ferguson, Macquarie.
OFM.—B. T. K. Power, Davis.
OSC.—S. M. Campbell, Wilkes.

CHANGES OF ADDRESS

VK— Australian Capital Territory 1CM—C. W. Meech, 69 Jacka Cres., Campbell. 1YL—D. A. Robertson, 128 Schlick St., Yarralumia. 1ATR-D. S. Robertson, 128 Schlick St., Yarra-

lumia.

New South Wales

2BJ—R. M. Harvey, 4 Lionel Ave., North Ryde.

2BZI—S. C. Lloyd, 36 Ryries Pde., Cremorns.

2GE—M. G. Datson, 296 Malton Rd., Epping.

2GY—J. O. W. Olsson, C/o. Royal Hotel, Orange.

2MP—M. E. Pieffer, Lot 32, Braddon St., Blacktown.

20U—A. N. Sinnbeck, Victoria St., Deniliquin.

2PF—F. A. Carruthers, 36 Neilson St., Lismore.

2PS—P. G. Stephen, 62 Yanderra St., Condell 2PS P. G. Stephen, of Jennes.
Park.
2RD-R. Longworth, 15 Alkoomie Ave., Forrestville.
2SB-R. W. Chaplin, Charlton St., Nambuca

238—R. W. Chaplin, Charlien St. Nambiece M. Hendel.

Mendel. Hendel. R.C.D.R. Western Bry. 2017—C. E. Iresel. 18 Moore St. Harbord. ST. W. Charles M. Harbord. St. W. Dukes, 46 Avian Cres. Lanc Core. 2017—G. A.D. Poper Covoling, 42 Wingham. 2020—G. 2017—G. A.D. Poper Covoling, 42 Wingham. 2020—G. St. Poper St. Poper Covoling, 42 Wingham. 2020—G. St. Poper St. Poper Covoling, 42 Wingham. 2020—G. A. Poper, 52 Wingham. 2020—G. Poper,

vue Hill.

2AVP—H. A. Perkins, 30 Kihilla St., Fairfield
Heights.

2ZCP—P. Croker, 8 Kembla Ave., Chester Hill.

2ZED—B. J. Doland, 521 Saunders Av., Albury.

2ZMN—M. L. Norman, 99 Megalong St., Leura.

2ZRS—R. D. Satchell, 61 Warejee St., Kings-

3CY-C. Yeoman, 34 Rosemary Rd., Beaumaris, 3IX-C. J. Reed, 5 Peterleigh Gr., Essendon, 3OQ-L. R. Williams, Lot 28, Medina St., Syndal, 3FG-A. C. A. Zander, 787 Doncaster Rd., Don-3PG-A. C. A. Zander, 767 Doncaster Rd., Don-caster.
3QU-C. H. Buckingham, 23 Marcus Ave., West Footscray,
3ACP-C. C. Pratt, 18 Chestnut Rd., Doveton.
3AIN-I. Grant, Station: 34 Black St., Brighton; Postal: Flat 3, Aviation Rd., R.A.A.F. Base, Laverton. 3AKF. N. Lloyd. Bank of N.S.W., High St., AMP.—T. M. Falmer, Station: Lake St. Eden-3AMP.—T. M. Fealmer, Station: Lake St. Eden-Station of the St. Burwood. ANNS—A. N. Bird, Iz Keltis St., Burwood. ANNS—L. Cootseray: Po 3AZT-D. E. Timms, Portable, 5 Spring St., Box Hill.

3ZAT-D. D. Tanner, Sale Rd., Maffra. 3ZBR-J. F. Ryan, 32 Hoddle St., Sale. 3ZBT-K. A. Thompson, 78 Edward St., Sand-3ZBT—K. A. Thompson, varigal Rd., Burwood.
3ZFK—D. J. Goss, 328 Warrigal Rd., Burwood.
3ZGC—W. R. Badrook, 2 Kalmia Ave., Mt.
Waverley.

Waverley.
Queensland
4YU-D. Dawson, Station: 17 Ready St., Mackay: Postal: C/o. Broadcasting Station
4MK, Mackay.
4ZBJ-J. M. Burton, Station: 27 Mabel St.,
Atherton: Postal: C/o. Radio Station Atherton: Postal: C/o. Radio Station 47 Yungabura. 4ZEB-R. E. Birley, 33 Ellis St., Sth. Brisbane. 4ZBP-T. F. Poole, Station: Tutle St., Kinga-roy; Postal: C/o. Austral Geo. Pros-pectors, Box Sebl., G.P.O., Brisbane.

pectors, Mox 2011, G.F.O., Brisbane.
South Australia
SGF—M. G. Farmer, 20 Stanley St., Plympton.
SZAC—K. J. Skewes, 5 Leslie Ave., Payneham.
SZAL—A. L. West, 7 Lascelles Ave., Beaumont.
SZCY—E. L. Murray, 11 Holden St., Kensington Park.
SZDI—B. J. Burns, Felix House, Stirling. SZDI—B. J. Burns, Felix House, Stirling.
SEIJ—E. J. R. Western Australa St., Gabbin.
SGM—G. A. Moss, 23 Brian Avc., Mt. Pleasant.
SS—J. Squires, Flat 2, 116 Broadway, NedSWE, C. W. S. Sampson Rd., Kalamunda.
SWI—L. McGeoth, 13 Gibson Sh. Bunbury.
SZAA—B. Stewart, 5 Dover Rd., Scarborough.
SCAS—S. J. Stewart, 5 Dover Rd., Scarborough.

Tasmania
7JO—J. G. Oliver, 83 Kaoota Rd., Rose Bay.
7JP—L. J. Durkin, 31 Lane St., Burnie.
7MZ—H. W. Hancock, Upper Nicholls St., TMZ—H. W. Hancock, vpp.
Devonport.
TPF—P. D. Frith, Station: Launceston Airport,
Western Junction; Postal: C/o. Free
Mail Bag, Launceston Airport.

CANCELLED CALL SIGNS

XCB.—E. Berlag.

ZCB.—E. Briag.

ZDN.—J. B. Knock.

ZNO.—D. B. Knock.

ZSI.—R. J. Scholtz.

ZSI.—R. J. Scholtz.

ZTR.—R. V. Thomas. 2TK-R. V. Thomas.
2AAY-W. S. Yarrington (now V
2ATA-P. A. Tavares.
2AUI-J. S. Innes (now VK4UI).
2AYG-P. Gresser (now VK5PG).
2ZDL-S. G. Lloyd (now VK2AYI.
2ZDD-M. C. Darby (now VK2AYI. VK2MW). Victoria VK6FX).

3FW-W. A Fulton (now VK6FX).

3FW-W. A Fulton (now VK6FX).

3FO-J. E. Rogers.

3AFO-B. C. Fultont.

3ZAK-E. K. Kolly.

3ZAK-E. R. Kolly.

3ZAK-E. R. Kolly.

3ZAK-E. R. Belanon (now VK3WB).

3ZDB-W. I. Dawson.

3ZDB-W. I. Dawson.

3ZDB-W. I. Belanon (now VK4ZGX).

3ZB-G. J. Soutt (now VK3ZDP).

3ZB-G. F. Soutt (now VK3ZDP).

Queensland 4KF-K. V. Ford (now VK5EJ). 4RF-F. J. Lubach.

ASP-F. J. LUGGEN.

51S-D. R. Shimedd.

51C-P. R. Crothwaite inow VKTIC).

51C-P. R. Crothwaite inow VKTIC).

52D-Port Pire Amateur Radio Society (now VKSPP).

52AR-VKSPP).

52BP-C. C. Poole

52CX-B. H. Wall (now VK6CX).

52CD-P. I. Woodlands (now VKSIP).

Western Australia 6AB—A. B. Ward. 6JR—J. R. Wood. 6JT—J. K. Twycross. 6SK—A. A. Skinner.

6SK—A. A. Skinner, Territory of Eapua and New Guinea 9AT/T—E. J. Roberts (now VK2ZJ), 9KP—K. F. Pulling, 9ZAN—A. D. Nutt (now VK9AN). 9CC-C. J. Cooke. Antarctica

CORRESPONDENCE

Any opinion expressed under this heading is the individual opinion of the writer and does not decessarily coincide with that of the publishers.

EDITORIAL.

Editor -A.L." Ders Sir. oncern. the Editorial in the April Issue of "A.R." written by the Internal Int Editor "A.R." Dear Sir.

Federal Executive's Reply The Federal Executive's Reply
The Jederal Executive agrees entirely with
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the International Control over the Executive might easily be excused for

then the freedition find it wasty beneficial to be a compared to the compared

and was known to Australian Amateurs when the Federal Council was asked to vote in favour of a Convention.

If a convention we have a convention of the call the call

-Federal Executive. PINK PAGES FOR PROLIX PROFESSORS

PINN PAGES FOR PROLIX PROFESSORS (1916) "A.R.". Doe flie erec's letter "Anasturu Relde", "A.R. Doe flie erec's letter "Anasturu Relde", "R. No. 6, 221 to 3 psychiatrist collages with noted that the patient was at High release with release that the patient was at High probabile date of birth, and made his diagnostic before the probabile date of birth, and made his diagnostic probabile date of Declarates in Medicine amongst products of Declarates in Medicine amongst products of the University of Sydney. "Australian Rodd," and anaster Call Book." 1833 "Australian Rodd," anaster Call Book." 1833 "Australian Rodd," Anaster Call Book." 1833 "Australian Rodd," Anaster Call Book." 1833 "Except Calendari, 1 find six Anasters in New South Wales graced with the utile "Dr." J.

G. Reed is, no doubt, sufficiently familiar with the mathematical theory of probability to calculate the chances for the non-occurrence of a Doctorate amongst these six. It was, in tack, more than a fair bet that he would have been correct in his assumption that there were

a Deciencies amongst these are. It was, in the presence of the line assumption that there were made to the control of the sample of the line assumption that there were the control of the line assumption that there were the control of the line assumption that the line assumption to the line

as well.

As for your Pink Pages, J. G. Reed, it's a good dose of pink pills you need.

I must be off now to see how many engineers take their Doctorate in Science. For reasons of professional etiquette I must remain

VK2-, 1st April, 1980. [The author of this letter is known to the Publications Committee.—Editor.]

Publications Committee—Editor, 1 September 20, 12 Septemb

a "Reversed" with the same agranase, and in an area devoid of house numbers the most and a series of the control of the contro

Editor "A.R." Does Sir.

Follow "A.R." Does Sir.

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Follow "A.R." Adaptat 351 "Bained of an article in a state of a stat

Editor "A.R.," Dear Sir, respected and dis-tributed veteran, Joe Reed, VKLIR, have to translutud veteran, Joe Reed, VKLIR, have to man his this word lettle by the inclusion of a respected members of the W.I.A.—dectors and respected members of the W.I.A.—dectors and A. minister's vecession is not a professional dector is not necessarily a professional one in members of the professional contraction of the contraction of the professional contraction of the contraction of the inference self-searches in life, health, and don-nated the contraction of the contraction of the self-searches in life, health, and don-nated the contraction of the contraction of the self-searches in life, health, and don-siderable self-searches in life, health, and don-sar, bart to, have never qualified for a Declorite, are healt to, have never qualified for a Declorite, to, have been self-searches and the contraction of the medicine or surgery are appended after the decrease of the contraction of the contraction of the contractio

and the name of the most fanous University as surpress, and Lordon for physicians, were surpress, and Lordon for physicians. Were out the droner who are never heard on the surpress of would do the weeding out of "droner." The would do the weeding out of "droner." The surpress of the su

int's call-sign book for members of the WLA. It is the copyright of the Postmaster-General, and a record of all those who have passed the necessary examination and given passed the necessary examination and control of the passed that the control of the control

Itali, or the accent I have cultivated, a Pommy Let us forget the Pink Page section, endeavour to get on the air as much as possible, get an an interest in any hobby he may have, an interest in his family, in the traditional friendly over the world. Above all, endeavour to keep abreast of the science and always willing to enthusiate which we received when we switched on the transmitter for the first time.

A supplied that the control of the control of

Editor "A.R.," Dear Sir,
I think most VK2 Radio Amateurs know me
I think most VK2 Radio Amateurs know me
of the Call Sign Book. As such, I wonder if
I may be allowed to voice my humble opintion in answer to Jec (VK2)H Reed's letter
to the call the such as the control of the call the call

titles in the "Book".

Basically, the suggestion of listing hobbies, etc., I think, is a good one, but what useful characteristics and the suggestion of the

time.

Judging from many years of listening, it is mainly the same call signs I hear on 40 metres, and they have contacted each other so many anyway. If hobbies were listed, why stop there? Why not list blind, legless, polio victim, etc., even photos? The "Pink Pages" would soon get out of hand.

would soon get out of hand.

A simpler way to overcome which the problem of
A simpler way to overcome which the lands
Amateurs live by) would be, I suggest, to print
the name, instead of just initials, against the
call sign. Bob VKZIN has used this system for
tool, the name of the operator is entered in
the Call Book. All he has to do is find the
"Book" to check the name!

"Book" to check the name!
Regarding the deletion of titles, I say "Leave
them there, please". I, for one, like to know
gentleman, even though, the "Doctor" may be
only a Bachelor of Medicine. At least I
know he is a medical man and has given many
years' study to that subject.

I think I can safely say that at least 75 per

years study to that suopect.

I think I can safely say that at lesst 75 per cent. of the whole population of Australia of the whole population of Australia of the control of the whole of the control of

far as they are concerned, a Doctor.

If Joe would like to be listed as "Professor"
Reed, that is OK with me, because, I think,
have yet to hear ion the air or offi, another
person who can discourse at such length on
so many, and such widely varied subjects,
ranging on the such profession of the contestion of the
most scientific.

Dabhne Meadows (Mrs. VK2IN),
VK2IN),

Meadows (Mrs. VK2IN)

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S.E.5, Vic. Phone: 211-3131

John Murray Moyle

AN APPRECIATION

This is the text of an "Appreciation" given by Graham Hall, VK2AGH, from his own station as part of the VK2WI Broadcast to members on Sunday, 20th March, 1960.

It was my privilege to be present at the Saturday to pay tribute to John. At I set there are no second to the saturday to pay tribute to John. At I set there are not set that we have a second to the saturday to the unknown beyond. a food of this world to the unknown beyond. a food of the second to the second that we have been a second to the second t

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requirements but its place in the entire forecommercial for requested which are already chancers for requested with are already. It is an education to turn across the spectrum of the control of the control of the control of the Late also and were one of an ecentime from assure hillevels in which to it underst algorial. Let each and were one of an ecentime from casers hillevels in which to it underst algorial. Let each and were one of an ecentime from American Hadin and the letter by Press (LTL), and who saws: "Done, remedy distinct of Amsteur Badds and his knowledge of the American Hadin and his knowledge and John Moyle in particular; and John Moyle in particular and John American Moyle and John Moyle in particular and John Moyle and John Moyle in particular and John Moyle in p It was only his indomitable spirit which carried him on until the job was finished. Let us heed John's words on organisation at International level. More important, let us recause our preliminary work over the years was not good enough." Does this not show the to evolve a Federal set-up which will strengthen Amsteur Radio in general and the W.I.A. in

particular?

Again let me urge you to read and re-read John's report of the LT-U.—two paragraphs for the paragraphs of the let the let

I am sure that each and everyone of us join the President in extending to Mrs. Moyle and her daughters our deepest sympathy for the loss of a loving husband and a devoted father.

Low Drift Crystals

FOR

AMATEUR BANDS

ACCURACY 0.02% OF STATED FREQUENCY

3.5 Mc. and 7 Mc. Unmounted ... £2 10 0 Mounted ... £3 0 0

12.5 and 14 Mc. Fundamental Crystals, "Low Drift," Mounted only, £5.

INCLUDE SALES TAX.

Spot Frequency Crystals

Prices on Application.

Regrinds £1/10/0

MAXWELL HOWDEN 15 CLAREMONT CRES.,

15 CLAREMONT CRES., CANTERBURY, E.7, VICTORIA

Amateur Radio, May, 1960



SPECIAL PRODUCTS



H.T. POWER TRANSFORMER FOR TRANSMITTER AND/OR MODULATOR POWER SUPPLIES

Type 1870 Primary: 230 or 240v. to high, medium, or low taps. (Overwound primary.) Suit-able for switching with non-shorting

Secondary 1: 850, 750 or 800 per side or of depending on primary tap selected. DC load current 200 mA. continuous or 250 mA. part intermittent with choke input filter. Secondary 2: 4.5 to 6v. at 0.3 amp. for pilot se with 5R4GY rectifier, choke input

FILAMENT TRANSFORMER Type 1516

R. ELECTRONIC EQUIPMENT

Road.

5v. at 3a., 1000v. DC working. For use with HT power supply and high level negative peak clipper filament voltage.

Melbourne,

Obtainable from A. & R. Distributors in every State.

MODULATION TRANSFORMER FOR 6N7 CLASS B

Type MT25

Primary:-- 8000 ohms p.-p. 10 watts

Secondary 1:- 4200 or 6000 ohms

Secondary 2:3.5 ohms, feedback or speaker V.C. Frequency Response:-

DRIVER TRANSFORMER FOR 6N7 CLASS B

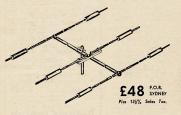
Type IT630 Primary:— 4500 ohms nominal, for 6V6, 6BW6, 6BM8, etc., as triede.

Ratio:— Primary to half Secondary 2:1. Frequency Response:-

COMPANY Vic.

Famous "TRAP MASTER" Aerials

Kilda



by Mosley

MX 1150

Model TA-33-JR (illustrated) is a threeband trap type rotary beam aerial designed to function with equal efficiency on 10, 15 and 20 metre bands. No mechanical switching is needed nor are tuning devices of any sort required. If your rig is capable of working into a 52 ohm load, simply connect a single 52 ohm coax line between transmitter and aerial, tune transmitter to any one of the three bands and sit back to enjoy the finest DX and the most satisfyingly solid contacts of your Ham career!

With proper installation, your TA-33-JR will provide up to 8 db. forward gain over a reference dipole and will offer 25 db. front-to-back ratio. The TA-33-JR will handle up to 300 watts input to the final amplifier at 100% amplitude modulation.

WORK 3 BANDS - 10, 15 & 20 - EQUALLY WELL with "TRAP MASTER"

... DX AERIALS of WORLD RENOWN!

Australian Agents: MAURICE CHAPMAN and CO. PTY, LTD., 158 Clarence Street, Sydney, BX 5127

Page 14 Amateur Radio, May, 1960

D X

John C. Pinnell, VK2ZR 15 Summit Avenue, Earlwood, N.S.W. Phone: UW 4248.

on its metres 19500 to 195002."

What has happened to Western Australia and Tasmania? So far no notes have been received from either State. How about it, fellas, letters would be appreciated. Besides a list of stations worked; make any comment that you think may be of interest to the DX'er.

NEWS AND NOTES

W5PQA has permission to operate from East Pakistan using the call sign AP5BIB. Due to sickness in the family the trip is off for the present.

W7PHO has received all the 9NIGW logs from the day he started operating up to and including March 5 and will continue to receive them at intervals whenever mail can be got at intervals whenever mail can be got if you still have not received your QSL, et W7PHO but be sure to include I.R.C. X Bulletin) VK2FR is back on Lord Howe Island after vacation to the mainland.

5A2TZ and \$A3TA, both from Tripoli, Libya, lave been fairly active on 21 Mc. c.w. around 730z. Signals were very strong.

JZ0HA and KJ6BV are on 5.5.b. in the 14 JZGHA and KJGBV are on s.b. in the 14 McChand. M tin).
FBBXX on the Kerguelen Isle is as active
as ever and by now must have worked most
Amateurs who are interested in DX. Been
coming through on 21 Mc. c.w. around 1000z
over past few weeks. coming through on 2! Mc. c.w. around 1000z over past few weeks.

There are still plently of Europeans on the inthe serily morning. They can be worked between 1000 and 2100z. Dut later to the company of the contact for many to add to their DXCC list.

ACTIVITIES

3.5 Mc. C.w. 2QL: WIBHM, WIJHM, W2FBS*, W2RES*, W3BIPM, W3ECR*, W3KUN*, W3MSK*, W7TZ*, W6LDD*, W3HIN*, W6LMN*, V\$EWW, JATXF*, Many JAs, KMCJJ, CESAG.

3.5 Mc. Phone Legg: KW6DA, ZL2AJX, ZL4OD.

7 Mc. C.w. **2AME: VRIB. **2QL: CNEBK* and CN8BP at 0720z, DL9PK*, FNNB* DLIFF*, G3BRQ*, JAs*, PA0PN*, ZE-310*, EAGA, LZs, UAs*. * Call signs and prefixes worked. z zero time—GMT.

SVD: Worked ELOB/MM, FBSXX, DM2ABL, Gs 1-4, GWSSL, LIAPS, KRSIM, OAFM, OH-FIF, OQSIG, SM3AGD, UAGSN, UAGSM, UB-SKAC, UDSFR, UMSKN, VPELN, VQ2IG, VYUDE, ZCAPP, 4XAWZ, XABZ, SMITP, VYUDE, ZCAPP, 4XAWZ, XABZ, SMITP, BFRS-195: JAGGK, HASKDQ, VOTDZ, ZESJW, ZSSAIL, ZSSAWX, ZSSKO, UAGKDA, UAGKKB,

7 Mc. Phone LMG1: ZLIFH, ZLIKF, ZLIRB, ZL3FR. 2AQJ s.s.b.: WSEGB several times. 14 Mc. C.w

SHAN NORTH PRINTED WITHOUT STORY USE AND VIOLENCE OF THE STORY OF THE

14 Mc. Phone
2AMB: XEIQP*, IIAJF*, ON4GM*, TIZEH*,
ZETJR.

ZETR. E.S. OKLIV. CZCO. ZEMŁ. ZETR. E.S. OKLIV. CZCO. ZEMŁ. KREĆD. KMEMD. KRIUTU. WEDR. WEGOV. KADV. WŁAS. WMEK. KATLD. K. KREW. LIS. ILVS. KRECJ. KRICV. F. KREW. LIS. ILVS. KRECJ. KRICV. T. KREW. LIS. ILVS. KRECJ. KRICV. T. KLEW. WADDI/MM. MMGR. V. KREW. LIS. ILVS. KRECJ. KREW. LIS. ILVS. KREW. LIS. ILVS. KREW. LIS. ILVS. KREW. LIS. ILVS. V. KREW. T. KREW. T. KREW. KREW. LIS. ILVS. V. KREW. T. KREW. T. KREW. KREW. LIS. KREW. KREW. LIS. KREW. KREW. LIS. KREW. KREW. LIS. KREW. K DD 99 KNR THARPS, TIESCS, DESC.

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HB9ET, VP9BI, E14Q, SMSGH, KP4AZ.
LSG1: HK4HW.
LGG1: CEAAGI, DLHIR, DJ2DW, P2KC,
GSNL, GMSEST, HL9JK, HC1FG, I1YK, IICVS,
J2DHA, JAJTS, KAZBD, KG5SA, KG6AJF, KX6CA, LASHE, VEZDWY, VSSGS, YUSHU, YU-SCA, LASHE, VESDWY, VSSOS, YUSHU, YU-LASHS: COMK CNECS, F28A, F9EX, GEPU, LASHS: COMK CNECS, F28A, F9EX, GEPU, LASHS: COMM, CONTROL OF COMMENTAL FIG. HBHFR, ONDIM, ONIOM, OZIQM, VC-ZIE, SMIDQ, F. Seeber: EAJFG, FABAU, FOBAX, HLSKJ, IIIS, KRELP, OHISM, ONIOM, TIRC, VRIDK, VSSUC, XEJJP, XWAL, YUJVE, 4STYL,

BERS-1002: HC1FG.

21 Mc, C.W. 2ZR: DJZIC*, EA7CL*, FSGR*, FB8XX*, G6VQ*, JA4LJ*, UA9DN*, WH6DJV*, ZS8AWP*, SATZ*, SASZA*.

4DO: JA*, KA*, W*, KH6*, F6KV*, HSIB*, UJ8KAA*, DJ2LM, DL3JJ, DL3ZM, G2DC, G3FMN, L2ZKBA, OHSTE, OKIAMS, OZTUU, UA0KUV, UA0KZA, UAIKAG, UA4KHN, UQ-ZKAA.

2EAA.

2. Me. Phone

AGU SAL: ZALIV, KIBS, DVIUS, G.B.

AGU SALIV, KIBS, DVINGAS, ZOILA,

BENG DIPT, GALA, GEB AGUS, BASS

BENG LIDER, GALA, GEB AGUS, BASS

BENG LIDER, GALA, GEB AGUS, G.B.

BENG LIDER, GALA, G.B.

BENG LIDER, G.B.

BENG LBM4: DL4FSG, EAIEY, F8PA, F9BO, CE-31F, DJ2AA, G3FPQ, G3HFD, G3JNX, HK7XT, HB9ZY, HV1HN, JAICB, JA6BC, HB9J, OH-4SM, SP9RF, VP5BL, VSSBB, YA1AO, ZC4FR,

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28 Mc. C.w.
201: W. VE*, KH*, JA*,
1305: W., VE*, KH*, JA*,
1305: W.K, JAIYX, JA7QP, JA3ACT, JA5DA, JASGS, KA2EB, KH6CLU, KW6WA, KR6UW, KR6DEF, KXEBT, KXCG, VE7AFL, VE7BBH, VSIGZ, UASDY, RBSKAA, FKSAU,
KRRID, KGGAFF, ZEJJB, SMKGA, SMCGH. L3074: EA7GS, DL1EH, CT1HE, G2XK, G2PU, JA, KRELF, ON4SZ, XW8AC, 4X4BO, W, KH, KA2MX, KA2KS, VE4SH, KX6CG.

OSL SITUATION

All SUMMATION

All some states of other in the pursuit of our avery important role. The time comes, here are all the states of t

any intention of returning one.

If all cards had been sent individually, by mail, it would have cost £35 per year for this figure was reduced to a bittles, but the figure was reduced to a fittle of the first things of the first things of the first things of the first things of the first figure. In my case the Bureau is not only cheaper but the returns are much higher. Here are some of the figures, counting only those who promised to QSL: OK—99 out, 98 in; OH—192 out, 107 in; UA—179 out, 131 in; DL—407 out, 315 in; SM—131 out, 82 in; G—445 out, 316 in; JA—311 out, 82 in; That is briefly the situation as I find it.

briefly the situation as I find it.

98Ls received—AAMS: CNZEK, KS4BB, OAAAV, TIZEN, VZSAA, VQSHT, YVSABI, SQLAAV, TIZEN, VZSAA, VQSHT, YVSABI, SQLAAND: XEII. XEII.A, VREW, TÖÖSS, SSKJATHAMM. BERS-193: CZSAT, CNSAX, DU30, FASIL, FASIA, UCRAS, VYSVG, VZSEW,
CREMEN, VKIC WILLS, ZSKAFT, TOMBON,
STILLING, VKIC WILLS, ZSKAFT, TOMBON,
STILLING, VKSCC, GSMY, HBSSI, IIAMU,
SWIDE, SAILOR, SAILO

For assistance in compiling these notes I wish to thank: The West Gulf DX Club, Box 227, Kerryville, Texas; 2QL, 2AMB, 5RX, 5RK, L5374, L5303, L5331, 3AOM, Frank Seeber, BERS-198, L5085, BERS-1092, and 3YD. Thanks from VK2ZR.

V H F

Frank P. O'Dwyer, VK3OF 190 Thomas Street

50 MEGACYCLES

are popping up all over the place. Following the sun storms in early April, the mail. shot up, commercials being logged daily to band edge in VKS. Mostly from the north, some from N.E., some from N.W. KH6 beacons have been identified several times. HLKA (230 watts input) made almost a daily appearance normally at good strength.

watts Impuel, maids almost a daily appearance with the property of the Month of the Brown front, Ex has lived up to its name by helicy were percent. Whi serve Area of the Month of the Mon

acts also

tacts also.

"TUTOUL"

"TU

Outside the hand it was a different packet of biscutts. The dignals audithe here in National Delween 49 and 50 megs., peaking N. and N.E., would suggest the band should have been open to somewhere during the day, Jim AAZT and the suggest that the suggest of the

their and that we a very veek 2A of 50.1 mg and that we a very veek 2A of 50.1 mg and 50.1 mg a follow: Fine Some frequencies and focation of stations that might be of interest are as follow: Fine 50.1 mg and 5

Aget 1—32GP, "make the constraint owner of the SUTH AUSTRALIA of the way very scrabby SUTH AUSTRALIA on the sew very scrabby Opening to JA, and two minor openings to the the sum of the su

mx for working back into the city.

There is plenty of m.c.w. on 6 mx for those the control of the city of the cit

the U.K.
Others heard on the band are George with
his new call 5GG (suggested phonetics: Gorgeous Gussy, Good Gosh, Go Go, and Gotcha! cous Gussy, Good Gosh, Go Go, and Gotchail.

Ron 5MK forever checking those mysterious weak sigs. Eric \$ZDQ with his laryngitis, Col 5RO with eyestrain through looking at the one-eyed monster, and Les 5AX with a snift of power loaded into a wet handkerchief, so he won't overload Comps. rx.—\$ZAW.

144 MEGACYCLES

SOUTH AUSTRALIA
Very poorly this month; most active being
Keith SMT and Ken SKC who have been getgetting in fart in the next for hunt. Ken
finds rx overload doesn't belp at all when
start overload to the start of the start
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s SOUTH AUSTRALIA

288 MEGACYCLES

208 MEGAUYULES
SOLTH AUSTRALIA
The one of the band is the seneral discussion on vertical and horizontal polarisation. Most seem to be in favour of horizontal and this is a good thing for the seatern Divisions use this method. There is a seatern Divisions use this method. There is a start of the seneral polarisation with the seneral polarisation of the seneral pola

AMATEUR T.V. VICTORIA

VICTORIA

At the second A.T.V. Convention on 16/12/69,
At the second A.T.V. Convention on 16/12/69,
Cover video from 3AUX in Melbourne. Very
favourable indications of the band (288 Mc).
The cover of t

DX of 40 miles. The tests were made with 70 watts, both aerials 16 element beams, and 07 221,726 so most interesting trip was made to ADV2 12%, the A.T.V. boys were most inter-1AWW/T now has a videous and hopes to get some coils for it soon. 6AO has his flying spot scanner going, good denillon but a lob F.S.S. Anyone interested in A.T.V. could content the above or 3BU/T.

GENERAL NEWS

Another, new call to speece in 2000 in Person. To other his control of the first reservoir.

Harry 2000 and of the first reservoir.

Harry 2000 and of the first reservoir.

Harry 2000 and the property of the control of the control

you on the air soon—3ZGP.
SOUTH AUSTRALIA
Phill ex-SZAD will be giving the lecture in
May and he will be discussing single sideband
and his experiences in G land. I suggest that
any bod who requires s.b. knowledge for the
v.h.f. bands should attend this lecture and
have a talk to Phil—3ZAW.

have a tunk of Fun-Mean. T.

A V.M. Group of the Tasmanian Division of the W.I.A. has been formed with the meetof the W.I.A. has been formed with the meetin the month at the Hobart Club Rooms of the
W.I.A. 147 Liverpool St. The inaugural meetW.I.A. 147 Liverpool St. The inaugural meet("INY) as President, D. Thorne (TZAI) as Secretary. All W.I.A. members who are intermonthly meetings. monthly meetings.

monthly meetings.

In order to perpetuate the memory of Athol
Johnson ("AJ), whose chief interest was v.h.I.
Induction of the control of the

S W L

Maurice Cox, WIA-L3055 Flat 1, 37 Boyd Crescent. Olympic Village, Heidelberg, N.23, Victoria.

Hi chaps, It's that man again with the next of the swiks in Australia. Not many letters this month, only the usual from VK7, and mil VKS, little from VK3, less from VK3, and mil vKs, little from VK3, less from VK3, and mil and a GM swil. re awards. These two letters were answered by Don Grantley. Don the were answered by Don Grantley. Don the his doings and ideas, some of which will be discussed at future meetings.

Thanks to the VK3 Council, approval has now been given for us to hold two meetings a month. The first of these will be hield on April 15 and will take the form of a construction night. The general meetings will be held on the last Friday of each month.

Now for a few letters. Firstly from Tom Hayward (L3072) who is still having trouble with his rx and has it back with the agents. Sure shope it comes back OK Tom. He has received a copy of a 400 page catalogue from his spy in W land; what a book!

has say in W lord, what a book!

Mas Billiard (12574), who went to Albury
Mas Billiard (12574), who were
Mas Billiard (12574), which were
Mas Billiard (12574), which
Mas Billiard

A might make mention here to all you s.w.ls.uary of this year we ran a Log Africa Contexruary of this year we ran a Log Africa Contexfor all VK. organized by the VK2 Group. The
rules appeared in Feb. "A.R." I received only
learn the received only
learn the received only
learn this property of the received only
learn thin and myself. Earle won the Context
with 45 points, myself second with 28 points,
and Ian Thomas with 12 points,
and Ian Thomas with 12 points,

and ian Infomes with 12 points.

I would like to mention here some comments made by fire BERSISS. I quote: "Here is my most unhappy with the hapbarard way in which the rules were worded. I submit my entry solely for the sake of being in it. I state of the sake of the size of the sake of the sa

firmed. Congrats, Eric.

Now from my Assist See, Ian Thomas, who has received earls from VKGIT and VKGCO, other enthusiastic savi. In his area, Hope you hag him Ian. Congrats, on obtaining your limited Treket at the January exam. I believe Ian will also keep an interest in the VKG Group.

We have letters here from Graeme Mann, of Scotch College. He and several other boys are interested in forming a group at the Col-lege. I have written to them and told them all the gen. Hope you are successful boys and would like to see you along at our meetings.

Welcome to Des Smith, an to the page and to the Group. another newcomer to the page and to the Krupy is a busic on Many of the Common of the Com

INTERSTATE GROUPS

NYEL—I have a spolary to make to the VK2 Control with a spolary to make to the VK2 control with the very two takes and since that they were two takes and since than howe mattaid them. So I will take soom noise the property of the very two takes the very two ta

owiching sides.
As the retiring Secretary I would like to thank everybody for their help last year and hope that the new committee will receive the hope that the new committee will receive the intending to produce the S.w.l. Handbook for our own members, who will be further notified in the near future. 73, Tim Mills, VKZZTM.

out own numbers, who will be further notified with ALSO.

MALASS.

WALASS.

Will by and contect some of the saw's, in the saw's and the saw and the saw

dent in passing the theory and regs. at use material carm, in a constant carm, in a carm, in

plenty of correspondence.)

Now for some interesting information from our friend point of the first control of the

DX NEWS

will be on s.s.b. from Zone 23 in the very near future, so here is your chance. Other s.s.b. stations promised are EASEO, an FES, and SNICJ (most likely on by the time you read this), whilst UJSOJ recently commenced using that mode from Zone 17.

read that, whilst UMDY receitly commenced that whilst the transfer of the second of th

QSL COMMENTS

This is not correct.

It is very construct to the construction of the construction of

DX LADDER



OVERSEAS SCHEDULES

I have on hand here the latest schedule from Radio Sweden. All times are in E.A.S.T. English language daily:— English language daily:— 2230-2290 to the Far East, 15240 and 9620 Kc; 0045-0115, South Asla, 15240 and 19620 Kc; 0345-0415, Africa, 15240 and 11705 Kc; 0345-0415, Africa, 15240 Kc; 0545-0615, Africa, 11706 Kc; 0580-0700, Europe, 7210 Kc; North America at 1145, 1315 and 0000 on 17840, 11819 and 9620 Kc. and 9620 Kc.
From Ketth Rossvof, Warrnambool, Vic., the
following: Kenya, 6466 B.B.C. News, 4885 and
following: Kenya, 6466 B.B.C. News, 4885 and
Kc.; Radio Bagdad, 9700-6730, English, 930 Kc.;
Radio Paris, 9709-6730, English, 290 Kc. (not
daily: Radio Ankara, 6700-6748, English, on
daily: Radio Ankara, 6700-6748, English, on
Philippines, 11 p.m. close on 3398 Kc., 12 p.m.
close on 9000 Kc. TYPE 65

General purpose with low frequency response suitable for lively halls.

TYPE 66

P.A. use where less low frequencies are required than the 65 with a lift in the middle frequency to ensure high output without feedback.

TYPE 67

a further reduction in low frequencies than the 66 and increase in high frequencies for intelligibility through noise.

THREE INDIVIDUAL TYPES IN THE FAMILIAR "65" CASE

Available in Low (M.D.) 50 ohms, and High (M.A.) Grid Impedance.



Retail Price including Sales Tax

Type 65 MA£11/0/7
, 65 MD ...£8/19/0
, 66 MA ...£11/3/6
, 66 MD ...£9/3/0
, 67 MA ...£11/3/6
, 67 MD ...£9/3/0

ZEPHYR PRODUCTS PTY. LTD.

58 HIGH STREET, GLEN IRIS, S.E.6, VICTORIA

PHONES: BL 1300, BL 4556



TRIMAX TRANSFORMERS LTD.

CNR. WILLIAM RD. & CHARLES ST., NORTH COBURG ... Phone: FL 1203

Page 18 Amateur Radio, May, 1960

NOTES

FEDERAL.

LEGA DOS AMADORES DE RADIO DE

ANGOLA

This is the national society for Amateurs in continuous contents of 184 members of Wilson and Conference of the Conference of Wilson and C

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and two, I reports 100 per cent. She aspecially a provided the control of the writer from August to the a second for the writer from August to the a second for the writer from August to the second for the second f

Worked Five KA Stations (W.F.K.A.S.) is warded by Far East Auxiliary Radio League d). Address: Awards Manager, F.E.A.R.L.

(N), A.P.O. 884, San Francisco, Calif. Requirements: Contact with 5 KA stations (JA and WA QSLs are not acceptable). Applications Sand QSLs or letter signed by officer of resonand CSLs or letter signed by officer of republic or military official that he has checked QSLs. Charge: Return postage 14 QSLs aubout the contact of the contact

as above.

Wenty-Five KA Stations (W.T.P.K. AS. Requirements: Contact with 28 KA stations (AA and WA QSLs are not acceptable). Application and charge as above. Endorsement: Open and the stations of the stat

A welcome respectation on the c.w. secA. Welcome respectation on the c.w. secSourier "Snow" Campbell, VKEMR, from his
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to be control to the land to the land to the land
to three years. -Ray Jones, VK3RJ, Manager

NEW SOUTH WALES

The month of March was highlighted in VX2
The month of March was highlighted in VX2
Deline very happy occasions. Readers will be
aware of the not unexpected but and loss of
savare of the not unexpected but and loss of
posting has death a severe blow to our hobby,
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and the posting has death a severe blow to our hobby,
and the posting has death as the posting has death
and the posting of the VX2 Divisional Headquarters Bullding (covered in another part of
another country and could be the visit to Dural of GNIL and the formation
of another country radio club.

the wife to Dural of GNY1, and the formation of the Control of Control Meeting opened at a following flowers: It was a fine to the Control of C

ted toks associated with the many-man, were ted. books associated with the many-man, which is a proper to the property of the

SILENT KEY

It is with deep regret that we record the passing of:-

VK2AIK-C. T. (Cec.) Horne. VK2APS-S. (Syd) Smith. VK3RR-H. E. (Dick) Dickason.

results of the complex of this Division product of the property of the complex of

needing. Liver been made available by Bone process. Liver been made of wallable by Bone The available by Bone The law Council of the VKD Division met and the night of 21st March at Carvay's New Teach and the night of 21st March at Carvay's New Teach and the Council of the Carvay's New Teach and the Carvay's New Teach and the State of the Carvay's New Teach and the Carva

reports, was made from VK9 to VK7 and om VK6 to ZL, and remembering that the oadcast was arranged at three days' notice thout recourse to P.M.G. landlines, the fectiveness of Amateur communication was monstrated and is of no little significance relation to national emergencies."

Throughout the year a varied programme roughout the year a ward programme of able on the programme of the program

rise on this and that. whilst in Melbourne, I was fortunate to have eral hours' yarn with your Federal Presi-it, Max Hull, and was given an insight of trials and tribulations that confronts F.E. ecially when a Secretary has not been avail-e for the past eighteen months. Whilst sit-g down in the Exhibition Building watch-

e for the part engineer months. Whilst office a managing profess in connection with Moonish Perival I purchased in connection with Moonish Perival I purchased in central and a second of the part of

the three groups at the reach. It is a server to have the Frank EPX twolse his force to have the Frank EPX twolse his country. Add with 287, Done was able to will a made these him Proof the definitions and these him Proof the definitions are self-three to the server that the server was done to the first part of the proof three three two putting out quite a properties simply of the proof the server was done with the server was done with the server was done to the server the server will be server the server that cream a server to the server the server to the server the server that the server th

Well chaps don't forget the next meeting at the Varsity on 13th May and also remember that the House of Hall is again open for all comers each fourth Wednesday of the month.

VICTORIA

Had an enjoyable evening at the Annual General Meeting of the Division. The President read the annual report, highlights of which are quoted here:

"The membership at the end of the financial year was 699.

Thering the year a considerable amount of Thering the year a considerable amount of Transmitters in order to bring them up to moment submards of shielding etc. It is forced to the property of the construction of YKEWI for use on the Sunday morning troud-ty and the construction of the property of the construction of many construction of property of the construction of This year for the first time the Western This year for the This year for the This year for the This year for the This year for This year This year for This year Th

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for general communication frequencies in the range 3-14 Mc. Higher frequencies can be supplied. THE FOLLOWING FISHING CRAFT FREQUENCIES ARE AVAILABLE IN FT243 HOLDERS, 6280, 4095, 4535, 2760, 2524. 5.500 Kc. T.V. Sweep Generator Crystals. £3/12/6.

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was the Mayor of Stawell, Cr. Hallam. Our thanks go to Bill 3AKW and all the helpers in the Zone for the work they put into the preparation for the Convention.

"In May '96, Amsteur Radio was brought before the public eye when Bert 3BB operated his tx from the Morwell High School during his tx from the Morwell High School during before the power for event with "shool" derived their Fall".

When Fall "service service to be Institute, Jim 1877 has found it necessary to resign as Jim 1877 has found it necessary to resign as the power of the

distributing cords.

"Three was a renewed interest in W.I.C.E.N.
Three was a renewed interest in W.I.C.E.N.
as there is no Civil Defence Organisation in
velocinal a present, it is fait that we must have
make alternative approaches for recognition, to
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"In concluding this report I would like to emphasise the importance of your continued whole-hearted support of the Institute, as in these times the Amateurs of Australia must speak with a united voice. To that end I hope you will all do your utmost to recruit new members."

members."

No election ballot was necessary and the meeting proceeded to recommend office-bearers. No election ballot was necessary and the meeting proceeded to recommend office-bearers. 2XEO and 3XCZ were welcomed to We extend our deepest sympathy to those brave souls who are now VK3 Council.

We extend our deepest sympathy to those brave souls who are now VK3 Council. For the control of the

A one-minute silence was observed in mem-ory of the late John Moyle, VK2JU.

The action of the VKG Council in proceeding water to be VKG Council in proceeding water to be VKG Council in proceeding water, and the VKG Council in proceeding water, and the VKKWI Neededsty lack of news. This work VKKWI Neededsty commented upon the VKKWI Neededsty commented upon different short of the present. Whise council was been dealers to be the present. Whise council was been do not be largely to we work the work of the present. Whise council was been do not be largely to we work the work of t After the close of the meeting all present then discussed the way things should be done, and "if I was doing it." well you know and if I was doing it. "well you know after an enjoyable night. How about you know after an enjoyable night. How about you come ing to the next meeting? Oh well, back to the asylum. (They only let him out for the Annual Meeting—Editor.)

SOUTH WESTERN BONG CONVENTION
During Statutes defension sixting artisting
shacks of interest around Ballaria. Ad 4.31
Provide Holds, Burn Steel, Burn Law, Burn Steel, Burn St SOUTH WESTERN ZONE CONVENTION

After such a late finith, Sunday's early start - 3 a.m. at Lake Burrumbert-west. The fore deleted and the prize for this event, as 1250 watt c.w. transmitter, was awarded to self-was a start of the series of the Jim 3ZGG made up for his bad start by winning the 2 mx fox hunt, atter finding out from the other starters what to do, and was again on the ball in the second blindfold x hunt. The first blindfold hunt being won by Peter 3ZAF.

The control of the co

event and Dick ABIK wen' the "noise generals to Dick.

All to Dick.

All to Dick.

All to Dick.

All to Book and Book and the season of the se

MOORABBIN AND DISTRICT RADIO CLUB MODRABIN AND DISTRICT RADIO CLUB
At our April meeting, Max 3ABO gave an
informal talk on some very interesting project
which deve a jot of comment was a simple
Capacity Bridge whereby small condensers of
shack can be easily and quickly identified by
firstly, adjusting the bridge to dip, and thes
shack can be easily and quickly identified by
firstly, adjusting the bridge to dip, and thes
Another project of great interest was a threewatt transatorised amplifer using easily content of the control of the control of the control
to the control of the control of the control
to the control of the control of the control
to the contro structed transformers and a minimum of parts. The 80 mx te hunt was won by Bob 3NZ; cunning approach, though simple, in hidding the tx. He hid it in his shake! What a man! The Barbeque in April was an unqualified and those who attended enjoyed their steak, the coffee, and the good cheer and good fellow-ship. There should be more of it, hi! ship. There should be more of it, mi Our fellow member, Morrie 3AMA, is still seriously ill in Heidelberg Hospital, although those of us who have visited him report that he is very bright and taking things very bravely. Our hearts go out to him. bravely. Our hearts go out to him.

In May a party of members will visit DigIn May a party of the party of the party
to be a picnic event so thould be enjoyed by
all those who participate, as was the visit to
D24. We had the services of Wess AAWK,
to be the party of the party of the party
and our thanks go to Wess for such an informative and niteresting evening. Don't forget fellows that we meet at 17 College Gve., Black Rock, the third Friday in every month at 8 p.m. Visitors are always very welcome.

QUEENSLAND BRISBANE AND DISTRICT

Well, DARBANK AND DISTRICT
with a with the 1905 Annual Dinner
with Fourier way, the 1905 Annual Dinner
with Fourier control cycle. The Dinner was
and at Wiksham Forrace", the room was
after the control of the control
and the control of the control
and the control
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gaze included their suspection. Before I all appears with the properties of the prop

analod in water. This level my mouth shall all the Article Council meeting the election of officers for Council tooks place and Stan 456.

At the Article Council meeting the election of control of the standard shall be all the

from all of us, Johnny.

You have probably heard by now that I was elected to the job of President in a very close ballot with Bruce and I wish to tell you that I will do my very best for the Division. My predecessors have set a very high standard in this position and I know it will be very hard to maintain, but I will try to the best of my Council is now preparing for the Palm Beach Convention and we will give you details as they come to hand. Keep the Queen's Birth-day week-end free because we want a good

attendance.

On the fringe area t.v.i., we are pleased to the the total of the transparence will be held on this problem in Moniference will be held on this problem in Moniference will be the whole business to the satisfaction of all. T.v. has its problems to the satisfaction of all. T.v. has its problems to the satisfaction of all. T.v. has the problems to the satisfaction of all. T.v. has the problems will be the transparence to the transparence will be the transparence to the transparence transparence to the transparence to the transparence transparence to the transparence transparence to the transparence transparence to the transparence transpare I couldn't resist that one so while you are cursing me for it. I'll QRT for this month - 4PR.

TOWNSVILLE

It was with deep regret we heard over the W.I.A. News Bulletin on Sunday, 12th March the passing of John 21V. confire so close to his return from I.T.U. Conference. We had ally of the Conference His forceful propunding of Amateur activities will be sorely missed by all.

missed by all.

A few of the boye discussing John's passing,
A few of the boye missed by the buggestion
that F.B.

Channels, that a special levy of 3/- be imposed
on all members each year till most i.T.U.
gate to represent us in Region III. as a tribute
to the memory of John 3JU. Money collected
be invested till required. A motion to that effect has been sent to 4WI, duly seconded, and to be discussed at the next meeting.

the next meeting. Wonder if other old boys get the kick out of just listening to ragchews and discussions on various subjects on the various bands. It is wonderful to just sit back and just listen; incidentally, it improves one's knowledge on a variety of doings in all countries. I listen quite a lot more than I operate.

Clause 4 UK back again in the fold and promises to put his shoulder to the wheel again. The fold and promises to put his shoulder to the wheel again. The fold has been also been also been a fold has been also been al

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is meters. Eric 4EL and Len 4GD speak over the back minerate and the state of the speak over the base force on 3M for an eaves adjustment to the force on 3M for an eaves adjustment to the state of the turn to speak. Where can one buy those small and turner? Speaking of long overs, and the speaking of long overs, on the speaking of long overs, on the speaking of long overs, on the speaking of long overs, or long to the speaking of long overs, or long to the speaking of long to the sp

4PF is worried with downward modulation on

SOUTH AUSTRALIA

SOUTH AUSTRALIA

The monthly general meeting of the Division that has got what it bases, more other than the post what it bases, more other than the post of the p on the pavement, and took about five minues to regain the meeting and adjust myself to the rhythm and beat of the gathering. Just why these buy and sell nights are so popular beats me at times, but without doubt the crowd always turns up in huge numbers and everybody seems to have a heck of a good

every production of the transfer of the transf

condition complete with rightlind muscles and conduct that I am a good automotive (if it is a good automotive (if

press just how virile and active the Division Speaking of records, the meeting established another record in the fact that one of the members, who shall remain sameless, came up selling our gear, it means quite a good sum for the newly formed Elizabeth readio club", get up from the floor, he had moved on, and am still recovering from the shock. Just a mattill recovering from the shock. Just

magine it, someone said thanks, and quite openly too. I am a success at last, someone has thanked me! That is a record if ever

openly bed, I am a nucleas at list, ammond the way of the control tell them what they can do with tner Im.

Ken DSB is seentably a cow man, but if
Ken DSB is seentably a cow man, but if
rect, be has a special modulator for cross-town
controls. Ben propriate the Industriant Controls

For the propriate the Industriant Controls

From Where these jokers get all the time to
medity from beats me, what should be lived to
plumbing, the dod jobs, the message, and last
plumbing, the cold jobs, the message, and last
is unsentify.

but not seek to the clinks. This this could have been considered to the country and the clinks and the country and the country. When heard here he was discoursing coal and then setting a course, on unfinching course, toward it. Sound words Les, although turned out to be behinds, and sometime have out of bounds. Spare your tears my friends, I get by!

timed Gut to be behinds, and sometimes even Left by:

Left by: comest adequately express our feetings. Hughlis and all it can say is keep plugging sway OM. and all it can say is keep plugging sway OM. and all it can say is keep plugging sway OM. as the seeking a suitable "fecun", whatever that is seeking a suitable "fecun", whatever that is seeking a suitable "fecun", whatever that is considered to be a feet of the same of the state of the same of t

Austin SWO, heard recently on the W.I.A. call-sock at his usual good strength and stee and an adverge manage to hear him being called by always managed to hear him being called by always operating from the chib room at Womers was operating from the chib room at Womers and the control of the in very handy for the emergency act-up. Arrhyshy who: have read the description of the hand of the state of t

his shadow never grow Jess.

Pat S.T. was soliced at the meeting and heat residence in the Eastern footballs. I don't residence in the Company of the Company of

to thwart me

to threat the.

Bern AM is still dashbing in a stab, but has Bern AM is still dashbing in a stab, but has been a stable and a stab of the stab of the

tv. and the v.h.fs.

Gilbert 86X has foreaken the v.h.fs. (the
Cilbert 16XX has foreaken the c.c.
bands. I hope I have the terms right because
I am not very hep to all this new-dangled
I am not very hep to all this new-dangled
square! Sid 3ME is at the moment of writing
very active, in fact he is very, very active,
cause of it all and if all is to be believed he
will continue to be that way for some time
will continue to be that way for some time

Marvey SIG was noticed at the J.R.E. in Marvey SIG was noticed at Marvey SIG was noticed at the J.R.E. in Marvey SIG was noticed at the Marvey SIG was not the M

TASMANIA

all members a chance to meet the Trustees in person, instead of only horwing them as some proced without any heatistion. If I sale, any proced without any heatistion, II I sale, any the process of the

beard him for some time, but it is under-standable. See nr. exponented as Divisional Traffic Manager since he returned from Alice Springs. His main complaint with the job is that he does not get enough traffic to handle, eardouss job during his absence. Carl SSS is buy building a new tr. A little dickey-bird is the same on that he started to build when he first got his ticket. Tut, tut, and a couple local traffic and the started traffic and the pre-ture of the started traffic and the pre-

is the same one that he served to build when to totaled, we have the control of t

but not when Joe finishes cartushing me. Well havony deliting hobby Russe feet steps with the state of the st to thereughly rubbits, meaning the season and whilst it is not my nature to act other than Little Lord Fauntleroy at all times, I cannot ignore my obvious duty to remind ene and all that since Comps. met with that seems to be acting a little queer at times. Nothing to worry about of course, but remember to bear this in mind when reading next. However, the control of the course, but remember to bear this in mind when reading next many control of the course, the course of the course of the course of the course, the course of the c name accidentally crop up. Anyway, I should worry, they don't call me "Pansy the Pure at Heart" for nothing.

We all extend our sympathy to Paul 7PJ following the death of his father late in March, Paul should soon have his new home com-plete at Lindisfarne, and soon after occupying same, he should be heard on the air. We will be pleased to hear you, Paul.

be pleased to hear you, Paul.

On 19th March, about a dozen of the southern members journed to Uncertoon for the of the office o scrutiny. I was also impressed with the set-up at 7FH. Max 7MX is to be congratulated on the way he conducted the Sunday morning broadcast for 7WI.

broadcast for TWI.

As a result of the elections at the Annual General Meeting, and at Council subsequently, the principal oldiers for the year 1980-51 are; Treasurer TCH and Secretary TKA. Jack 7JB has taken over the dutties of broadcast officer and is continuing as QSI. Manuer. We also Dinner. Peter, the author of the original PAMG. Amateur Handbook, is moving to VK4 after a trip to Europe.

70M has been in New Zealand for more than month dealing with the problem of vehicular rries. At the April Divisional meeting our Presi-At the April Divisional meeting our President was proud to receive from the Federal Contest Committee Chairman the R.D. Trophy Contest Committee Chairman the R.D. Trophy Contest Cont

and fight us for it.

At the same meeting, we were most fortunate to have Mr. Maderiey, television enginrelevision. Transmitters. His infectious enthusisam for his subject, his quick wit, his grip
of his subject and ability to convey to the
various big issues, all blended to make a most
various big issues, all blended to make a most
memorable lecture. We all thank him most

heartily.

Five new members were elected at this meeting, and we welcome you to the Institute. May I remind all members that subscriptions have been due since 1st March. Please attend to the payment of your sub, now, so that those who work in an honorary capacity will not have to chase you up for it. will not have to chase you up for it.

Lee TKC has settled down at Belleric after

Lee TKC has settled down at Belleric after

be deading GRM to the bands from his Hobart

be adding GRM to the bands from his Hobart

to see you along at the meetings, too, Terry,

TJB and TXL were privileged to be visited

Hobart early in April. We also welcomed 3KU

to our April meeting. 73 lan TZZ.

NORTH WESTERN ZONE Well here we are once again after a tem-porary absence in the form of no notes in the last issue "A.R."

In March the Annual Meeting and Dinner of the Division was held on the Coast at our usual meeting place in Ulverstone and I think everything went off fairly successfully, apart from little details we thought of afterwards, but we'll put them on file for perhaps a future occasion.

THURE OCCSSION by sessisted by Ken TKA and "Snow" "GR, kept the meeting moving without too many litches and reports and what was you that go with Annual Meetings were prior to the meeting were made known, which goes us Tom TAL as cur Divisional President tions to you, Tom, and we trust you will spend a happy year in the job.

spend a happy year in the job.

The meeting was duly declared closed and nourishment in its many and varied forms, bevaried degrees partaken of by all present;
thoroughly mixed, or interspered with, much
talk both: "shop" and otherwise. The usual
talk both "shop" and otherwise the usual
persons delegated to such duttes and the eating
part of the programme proceeded to a satis
part of the programme proceeded to a satispart of the programme proceeded to a satisfactory conclusion. Television on a closed circuit was operating most of the evening and I think most bods

present saw themselves on t.v. for the first time. Some photos were taken of the gathering, using the t.v. flood lighting; haven't heard how they turned out, I don't know whether they were "Ham" photographers or not.

The QSO proceeded admirably throughout The QSO proceeded admirably through the evening with chaps moving round a yarning. As the hour got later, members the net gradually sighed and pulled out a eventually the tube in the final showed sight of loss of emission, so we pulled the switch and wrote "finish" in the log to most enjoyable evening.

The following morning most southern vis-tors moved out, "running mobile" and pro-ceded to the QTH of Max 7MX from whence he usual Sunday morning broadcast and oundun was held.

The usual monthly general meeting was held a April and urgent and pressing business was iscussed and dealt with.

discussed and dealt with.

At least two of our associate members had a shot at the A.O.C.P. exam. in April, so join with me and wish them the best of luck. Max TMX is beginning to pile up some DX must be working OK. The question of the month is—when will Terry TTT get his new rig finished?

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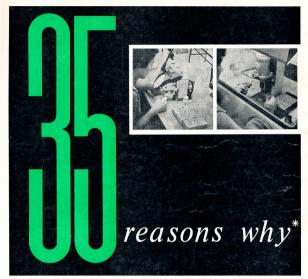
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Amateur Radio, May, 1960